

U.S. Army Corps of Engineers Galveston District Final Environmental Impact Statement

for

Texas City's Proposed Shoal Point Container Terminal

Volume II



APPENDIX A

CLEAN WATER ACT SECTION 404/RIVERS & HARBORS ACT SECTION 10 PERMIT APPLICATION

APPLICATION FOR DEPARTMENT OF THE ARMY PERMIT (33 CFR 325)

OMB APPROVAL NO. 07 10-0003 Expires June 30, 2000

Public reporting burden for this collection of information is expected to average 10 hours per response, although the majority of applications should require 5 hours or less. This includes the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Department of Defense, Washington Headquarters Service Directorate of Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302; and to the office of Management and Budget, Paperwork Reduction Project (0710-0003), Washington DC 20503. Please DO NOT RETURN your form to either of those addresses. Completed applications must be submitted to the District Engineer having jurisdiction over the location of the proposed activity.

PRIVACY STATEMENT

Authority: 33 USC 401, Section 10; 1413, Section 404. Principal Purpose: These laws require permits authorizing activities in, or affecting, navigable waters of the United States, the discharge of dredged or fill material into waters of the United States, and the transportation of dredged material for the purpose of dumping it into ocean waters. Routine Uses: Information provided on this form will be used in evaluating the application for a permit. Disclosure: Disclosure of requested information is voluntary. If information is not provided, however, the permit application cannot be processed nor can a permit be issued.

One set of original drawings or good reproducible copies which show the location and character of the proposed activity must be attached to this application (see sample drawings and instructions) and be submitted to the District Engineer having jurisdiction over the location of the proposed activity. An application that is not completed in full will be returned.

	(ITEMS 1 THRU 4	TO BE FILLED BY THE CORPS)	
1. APPLICATION NO. 21979	2. FIELD OFFICE CODE	3. DATE RECEIVED	4. DATE APPLICATION COMPLETED
	(ITEMS TO B	E FILLED BY APPLICANT)	
5. APPLICANT'S NAME City of Texas City – Doug	APPLICANT'S NAME City of Texas City – Doug Hoover 8. AUTHORIZED AGENT'S NAME AND TITLE (an agent is not required) Joe C. Moseley, Ph.D., P.E., Principal		
6. APPLICANT'S ADDRESS P.O. Box 2608 Texas City, Texas 77592 7. APPLICANT'S PHONE NOS. W/AREA CODE		9. AGENT'S ADDRESS Shiner Moseley and Associates, Inc. 555 N. Carancahua, Suite 1650 Corpus Christi, Texas 78478 10. AGENT'S PHONE NOS. W/AREA CODE	
a. Residence		a. Residence	
b. Business 409-643-592	7	b. Business 361-857-2211	
11. STATEMENT OF AUTHORIZATION			
I hereby authorize Shiner Moseley and Associates, Inc. to act in my behalf as my agent in the processing of this application and to furnish, upon request, supplemental information in support of this permit application. Sold Stenature Stenature Sold Stenature Sold Stenature Sold Stenature Sold Stenature Sten			
	NAME, LOCATION AND DE	SCRIPTION OF PROJECT OR ACTIV	TY
12. PROJECT NAME OR TITLE (see Shoal Point Container Term			
13. NAME OF WATERBODY, IF KNOWN (if applicable)		14. PROJECT STREET ADDRESS (if applicable)	
Galveston Bay			
15. LOCATION OF PROJECT Galveston COUNTY	Galveston Texas		
16. OTHER LOCATION DESCRIP	TIONS, IF KNOWN (see instructions) City Harbor and south of Tex		

17. DIRECTIONS TO THE SITE

Proceed along Loop 197 east for approximately 2 miles. Turn right at Gulf Coast Waste Disposal Authority and proceed along unimproved road for approximately 3 miles.

18.	18. Nature of Activity (Description of project. include all features)		
	Construct a containership terminal including container yard, access roadway, wharves, berthing area, turning basin, channel deepening, associated infrastructure, transmission lines, relocation of existing utilities, disposal areas, and habitat using dredged material.		
19.	Project Purpose (Describe the reason or purpose of the project, see instructions)		
	Provide a modern container terminal.		
	USE BLOCKS 20-22 IF DREDGED AND/OR FILL MATERIAL IS TO BE DISCHARGED		
20. Reason(s) for Discharge Removal of material from berthing areas, turning basin, and channel deepening. Material to be placed for the following purposes: site preparation, construction of containment levees, and creation of additional habitat.			
			21.
	Total of 11 million cubic yards: mix of stiff clay – 70%, sand – 20%, and silt – 10%		
22.	Surface Area in Acres of Wetlands or Other Waters Filled (see instructions) A total of 13.34 acres of shallow water, vegetated habitat will be filled during project construction. A total of 650.9 acres of open water will be dredged and a total of 366.7 acres of open water habitat will be used for construction of beneficial use sites.		
23.	Is Any Portion of the Work Already Complete? Yes 🗍 No 🛛 IF YES, DESCRIBE THE COMPLETED WORK		
24.	Addresses of Adjoining Property Owners, Lessees, Etc., Whose Property Adjoins the Waterbody (If more than can be entered here, please attach a supplemental list)		
	Port of Texas City P.O. Box 591 Texas City, TX 77592-0591 Texas City, TX 77592 Union Carbide P.O. Box 471 Disposal Authority P.O. Box 12873		
25.	List of Other Certifications or Approvals/Denials Received from other Federal, State or Local Agencies for Work Described in This Application.		
	AGENCY TYPE APPROVAL* IDENTIFICATION NUMBER DATE APPLIED DATE APPROVED DATE DENIED		
	None		
* V	Vould include but is not restricted to zoning, building and flood plain permits		
26	Application is hereby made for a permit or permits to authorize the work described in this application. I certify that the information in this application is complete and accurate. I further certify that I possess the authority to undertake the work described herein or am acting as the duly authorized agent of the applicant.		
	- Jac C Moseley I 29 July 02		
	SIGNATURE OF APPLICANT DATE		
	The application must be signed by the person who desires to undertake the proposed activity (applicant) or it may be signed by a duly authorized agent if the statement in Block 11 has been filled out and signed.		

18 U.S.C. Section 1001 provides that: Whoever, in any manner within the jurisdiction of any department or agency of the United States knowingly and willfully falsifies, conceals, or covers up any trick, scheme, or disguises a materiel fact or makes any false, fictitious or fraudulent statements or representations or makes or uses any false writing or document knowing same to contain any false, fictitious or fraudulent statements or entry, shall be fined not more than \$10,000 or imprisoned not more than five years or both.

USACE Permit No.: 21979 Application: CITY OF TEXAS CITY Date: JULY 12, 2000 Sheet 1 of

TEXAS CITY SHOAL POINT RAII WAY PORT OF TEXAS CITY BENEFICIAL USES AREA PROJECT SITE MITAGATION : SWAN

LOCATION MAP

VICINITY MAP

PROJECT LOCATION

NOTES:

- 1. THE PROJECT PURPOSE IS TO BUILD A MODERN CONTAINER TERMINAL THAT INCLUDES CHANNEL DEEPENING, BERTHS, WHARFS, CONTAINER YARD, ACCESS CORRIDOR, MITIGATION, AND BENEFICIAL USE SITES.
- 2. MAJOR ASSETS OF SHOAL POINT ARE: LANDSIDE ACCESS, WATER ACCESS TO GULF, COMPATIBLE LAND USE, MINIMAL ENVIRONMENTAL IMPACTS AND ABILITY TO EXPAND. CONSTRUCT PROJECTS IN PHASES.
- 3. THE ENTIRE PROJECT WILL BE PERMITTED, HOWEVER IT WILL BE BUILT IN THREE PHASES BEGINNING WITH A 125 ACRE TERMINAL AND TWO BERTHS WITH AN ULTIMATE SIZE OF 400 ACRES AND SIX BERTHS.
- 4.DREDGE MATERIAL FROM THIS PROJECT AND THE EXISTING MAINTENANCE OF THE TEXAS CITY CHANNEL PROJECT WILL BE USED TO CONSTRUCT MULTIPLE BENEFICIAL USE SITES (SHALLOW WATER) NEAR SHOAL POINT.
- 5. MITIGATION FOR WETLAND IMPACTS WILL BE PROVIDED AT THE NORTH END OF SWAN LAKE DURING THE CONSTRUCTION OF PHASE I.

APPLICANT: CITY OF TEXAS CITY

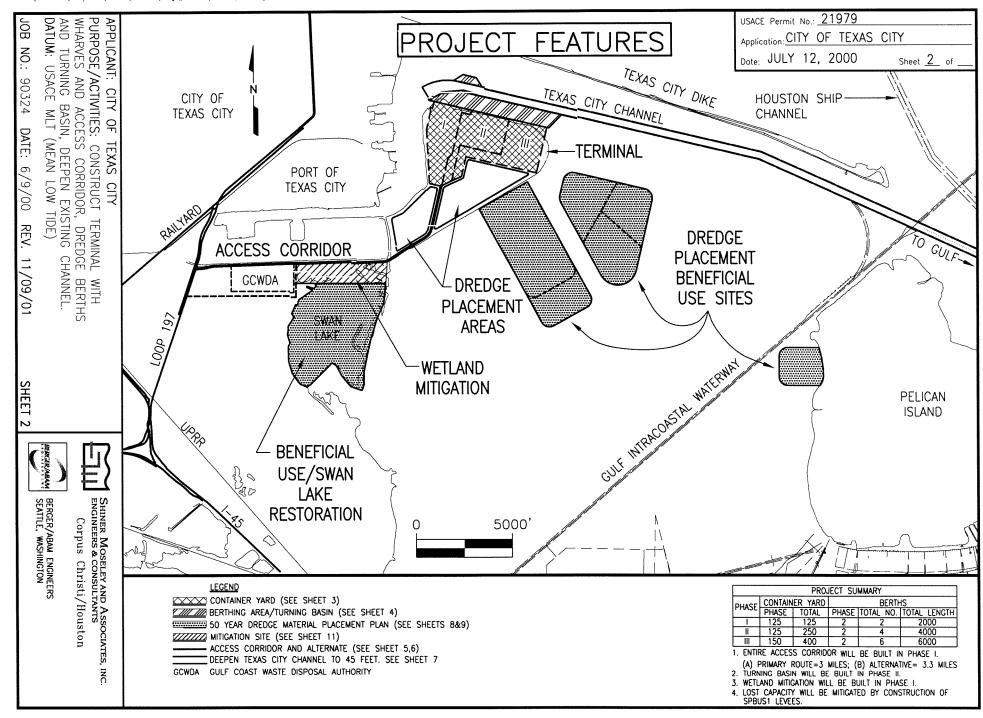
PURPOSE/ACTIVITIES: CONSTRUCT TERMINAL WITH WHARVES AND ACCESS CORRIDOR, DREDGE BERTHS AND TURNING BASIN, DEEPEN EXISTING CHANNEL.

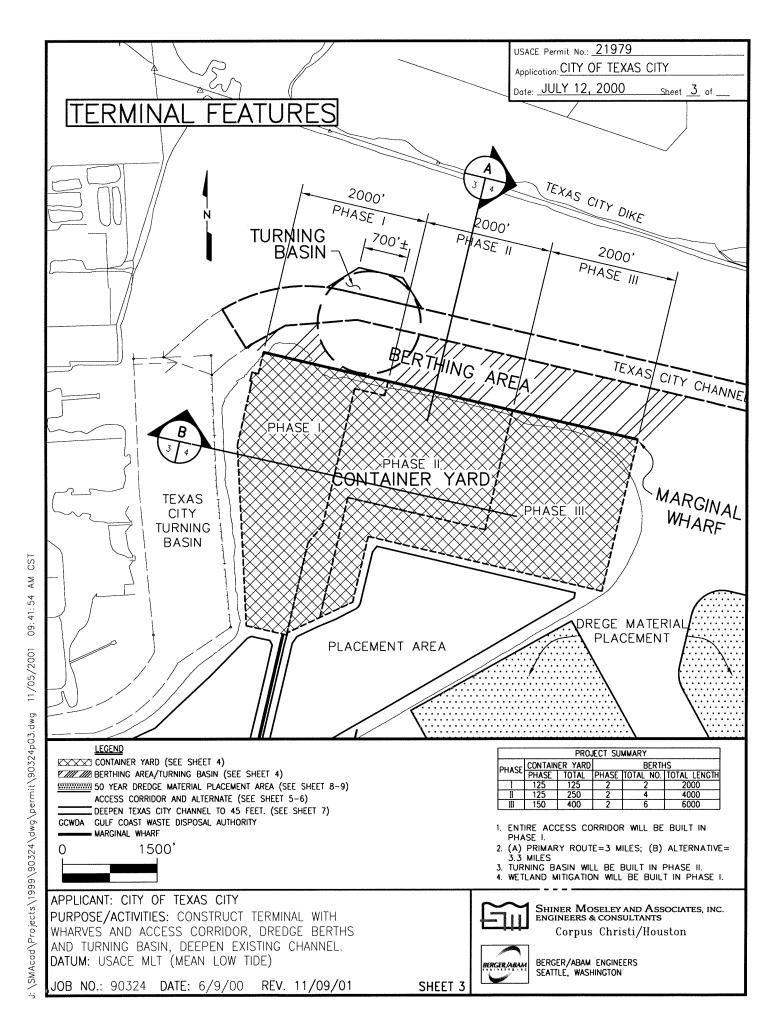
DATUM: USACE MLT (MEAN LOW TIDE)

JOB NO.: 90324 DATE: 6/9/00 REV. 11/09/01

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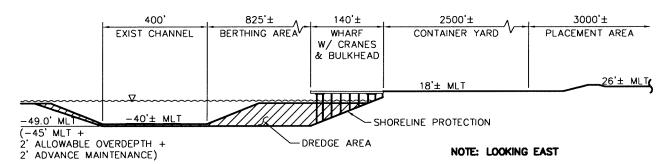




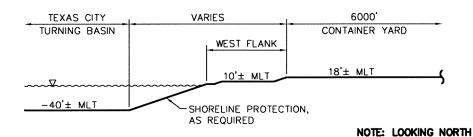


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TERMINAL, BERTH &



SECTION THROUGH BERTHING BASIN, WHARF TERMINAL SCALE: N.T.S.





NOTES:

- SHORELINE STABILIZATION REQUIRED UNDER WHARF. STABILIZATION MAY BE BULKHEAD, REVETMENT, OR OTHER STRUCTURAL METHOD.
- SUBMERGED AREA UNDER WHARF:

PHASE I - 275,000 SF PHASE II - 550,000 SF PHASE III - 825,000 SF

APPLICANT: CITY OF TEXAS CITY

PURPOSE/ACTIVITIES: CONSTRUCT TERMINAL WITH WHARVES AND ACCESS CORRIDOR, DREDGE BERTHS AND TURNING BASIN, DEEPEN EXISTING CHANNEL

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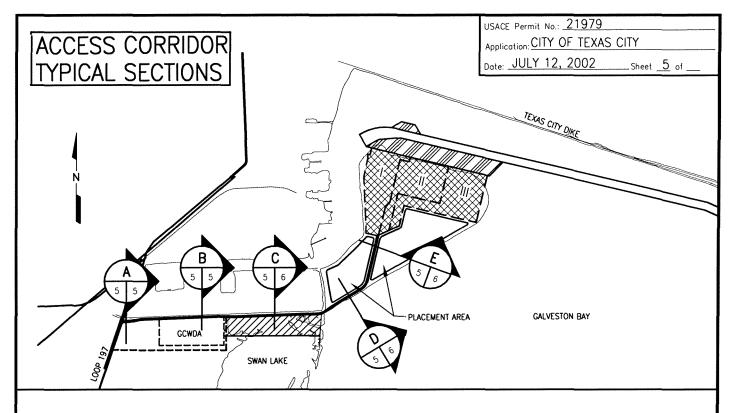
Shiner Moseley and Associates, inc. engineers & consultants ${\bf C}$ Corpus Christi/Houston

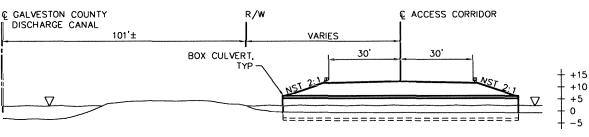


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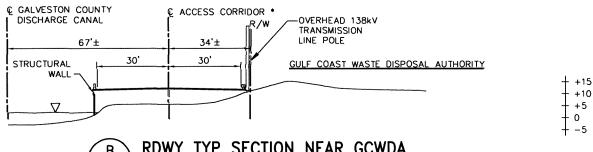
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ΑM





A RDWY TYP SECTION NEAR LOOP 197 5 | 5 | SCALE: N.T.S.



B RDWY TYP SECTION NEAR GCWDA
5 5 SCALE: N.T.S.

* WORK INCLUDES RELOCATION OF EXISTING UTILITIES

N.S.T. = NOT STEEPER THAN

APPLICANT: CITY OF TEXAS CITY

PURPOSE/ACTIVITIES: CONSTRUCT TERMINAL WITH WHARVES AND ACCESS CORRIDOR, DREDGE BERTHS AND TURNING BASIN, DEEPEN EXISTING CHANNEL.

DATUM: USACE MLT (MEAN LOW TIDE)

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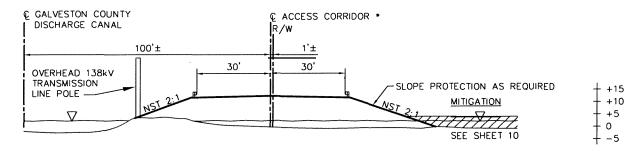
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ACCESS CORRIDOR TYPICAL SECTIONS CONT.

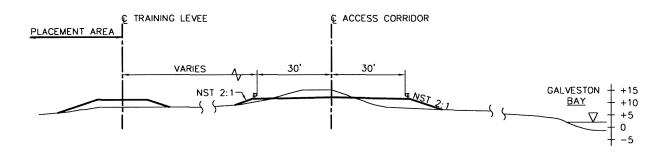
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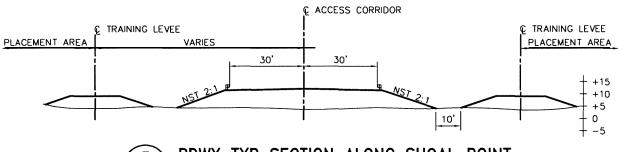
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RDWY TYP SECTION ADJACENT TO MITIGATION SITE & SWAN LAKE 5 6 SCALE: N.T.S.



D RDWY TYP SECTION ALONG SHOAL POINT SOUTHERN LEVEE SCALE: N.T.S.



E RDWY TYP SECTION ALONG SHOAL POINT

SCALE: N.T.S.

* WORK INCLUDES RELOCATION OF EXISTING UTILITIES

N.S.T. = NOT STEEPER THAN

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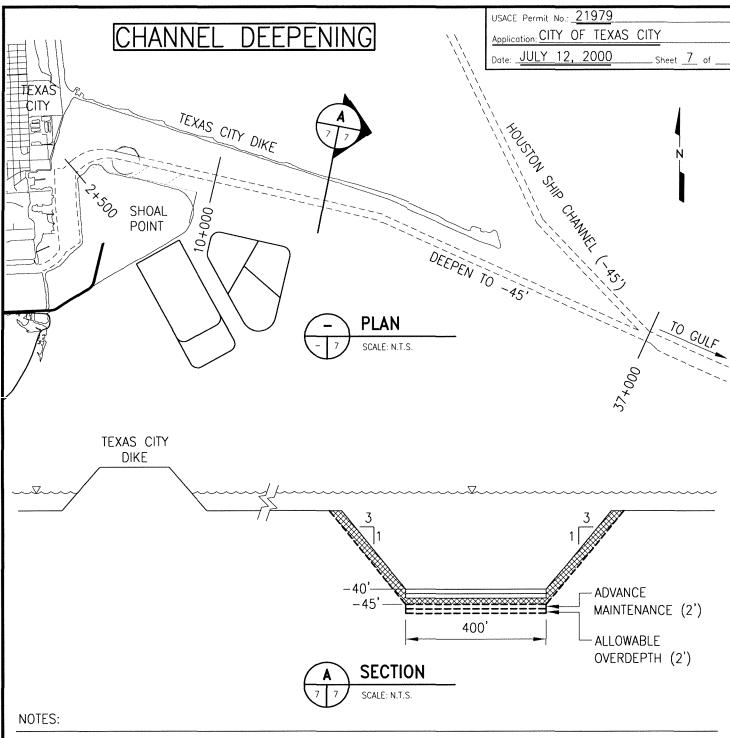
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- 1. THE EXISTING TEXAS CITY CHANNEL WILL BE DEEPENED FROM 40 FT. TO 45 FT. FROM THE SHOAL POINT TERMINAL SITE TO THE HOUSTON SHIP CHANNEL, (STA 2+625 TO 37+428).
- 2. TO BE CONSISTENT WITH DREDGING PROCEDURES IN FEDERAL CHANNELS THE DEEPENING WILL INCLUDE 2 FT OF ADVANCE MAINTENANCE DREDGING AND 2 FT OF ALLOWABLE OVERDEPTH.
- 3. THE HOUSTON SHIP CHANNEL IS CURRENTLY BEING DEEPENED TO A DEPTH OF 45 FT.
- 4. THE CURRENT BOTTOM WIDTH OF 400 FT. WILL BE MAINTAINED.

APPLICANT: CITY OF TEXAS CITY

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DATUM: USACE MLT (MEAN LOW TIDE)

JOB NO.: 90324 DATE: 6/9/00 REV. 11/09/01



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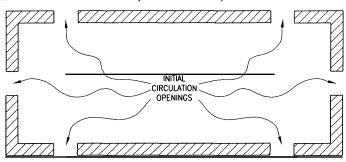
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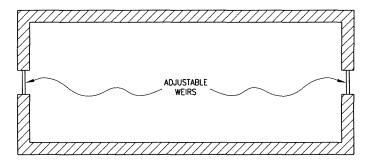
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50 YEAR DREDGE PLACEMENT AREAS/BENEFICIAL USES SITES ILLUSTRATIVE CONCEPT

(NOT TO SCALE)

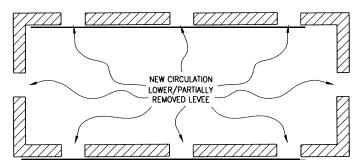


STAGE 1: BUILD CONTAINMENT LEVEES WITH NEW CONSTRUCTION; DREDGE MATERIAL, SHORELINE PROTECTION PROVIDED AS NEEDED; OPENINGS IN LEVEES WILL ALLOW CIRCULATION & WATER EXCHANGE INSIDE CELL.



STAGE 2: FILL WITH DREDGE MATERIAL AND ALLOW TO CONSOLIDATE.

STAGE 3: AFTER CONSOLIDATION, SHAPE FILL MATERIAL TO ELEVATIONS APPROPRIATE TO CONSTRUCT SHALLOW WATER HABITAT CONSISTING OF UPLANDS, HIGH MARSH, LOW MARSH, SUBMERGED GRASS AND OPEN WATER.



STAGE 4: PLANT VARIOUS TYPES OF DIVERSE HABITATS (BY OTHERS). PARTIALLY REMOVE LEVEES TO PROVIDE WATER CIRCULATION/EXCHANGE; LEAVE SIGNIFICANT PORTIONS OF LEVEES IN PLACE, EITHER EMERGENT OR SUBMERGED TO PROVIDE STABILIZATION/ PROTECTION OF SHALLOW WATER HABITAT.

NOTE: THIS SECTION IS REPRESENTATIVE ONLY; DETAILS WILL VARY DEPENDING ON SPECIFIC LOCATION

APPLICANT: CITY OF TEXAS CITY
PURPOSE/ACTIVITIES: CONSTRUCT TERMINAL WITH
WHARVES AND ACCESS CORRIDOR, DREDGE BERTHS
AND TURNING BASIN, DEEPEN EXISTING CHANNEL.

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SHORELINE PROTECTION

NEW CONSTRUCTION MATERIAL

MAINTENANCE MATERIAL REMOVE PORTIONS OF LEVEE

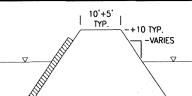
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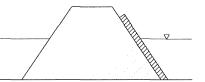
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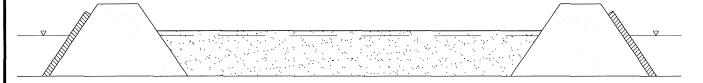
50 YEAR DREDGE PLACEMENT AREAS/BENEFICIAL USES SITES ILLUSTRATIVE CONCEPT (CONT.)

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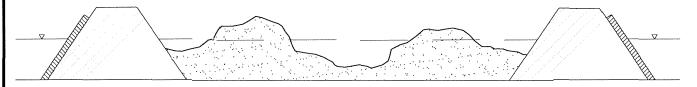




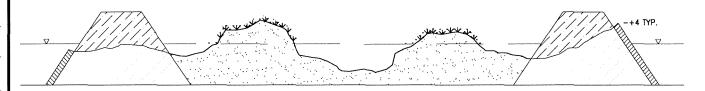
STAGE 1: BUILD CONTAINMENT LEVEES WITH NEW CONSTRUCTION; DREDGE MATERIAL, SHORELINE PROTECTION PROVIDED AS NEEDED; OPENINGS IN LEVEES WILL ALLOW CIRCULATION & WATER EXCHANGE INSIDE CELL WHERE APPLICABLE.



STAGE 2: FILL WITH DREDGE MATERIAL AND ALLOW TO CONSOLIDATE. CONSTRUCT ADJUSTABLE WEIRS TO HANDLE EFF.



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APPLICANT: CITY OF TEXAS CITY

PURPOSE/ACTIVITIES: CONSTRUCT TERMINAL WITH WHARVES AND ACCESS CORRIDOR, DREDGE BERTHS AND TURNING BASIN, DEEPEN EXISTING CHANNEL.

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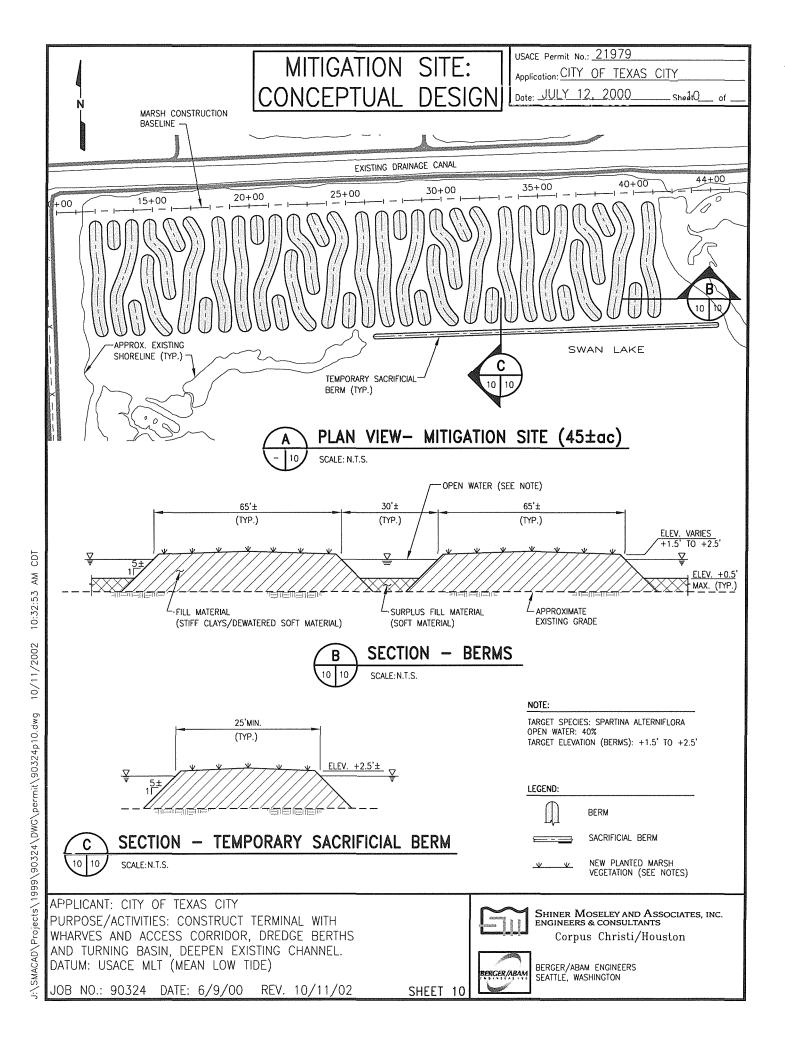


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CST



USACE Permit No.: 21979

Application: CITY OF TEXAS CITY

Date: JULY 12, 2000 Sheet 11 of

MITIGATION MONITORING PARAMETERS

- 1. A transplant survival survey of the planted mitigation area must be performed within 60 calendar days following the initial planting effort. If at least 50% survival of transplants is not achieved within 60 calendar days of planting, a second planting effort will be completed within 60 calendar days of completing the initial survival survey. If optimal season requirements for replanting targeted species is not suitable when replanting would be required, the Corps Galveston District (Corps) must approve a replanting schedule.
- 2. Written reports detailing plant survival must be submitted to the Corps within 30 calendar days of completing the initial survival survey and any subsequent replanting effort.
- 3. If after one year from the initial planting effort (or subsequent planting efforts) the site does not have at least 35% aerial coverage of targeted vegetation, those areas that are not vegetated will be replanted using the original planting specifications or as determined by consultation with the resource agencies and the Corps.
- 4. If after three years from the initial planting effort (or subsequent planting efforts) the site does not have at least 70% aerial coverage of targeted vegetation, those areas that are not vegetated will be replanted using the original planting specifications.
- 5. In addition to the initial survey report, progress reports will be submitted to the Corps-Galveston District at 6 months, 1 year, 2 year, and 3 year intervals following the initial transplanting effort and subsequent replanting efforts. Photos of the mitigation site will be included.

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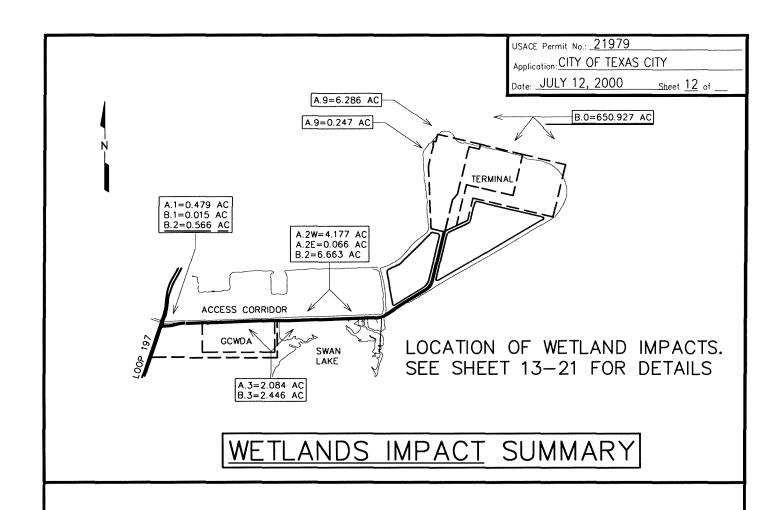
JOB NO.: 90324 DATE: 6/9/00 REV. 10/11/02



Shiner Moseley and Associates, inc. engineers & consultants Corpus Christi/Houston







Summary of Jurisdictional Wetlands

A. Section 404 Wetlands			
Location ID	Area (Acres)	Description	
A.1	0.479	Adjacent to Loop 197	
A.2	0.066	Swan Lake – East of Upland Ridge	
A.2	4.177	Swan Lake - West of Upland Ridge	
A.3	2.084	South Shore of Hurricane Channel	
A.5	6.286	North Shoreline of Shoal Point	
A.9	0.247	Drainage Ditch from Shoal Point Cell C	
Subtotal	13.339		
B. Open Water – Section 10			
Location ID	Area (Acres)	Description	
B.1	0.015	Adjacent to Loop 197	
B.1	0.566	Adjacent to Loop 197	
B.2	6.663	Swan Lake	
B.3	2.446	Hurricane Channel	
B.0	650.927	Areas of Other Dredging - berthing area,	
		turning basin, ship channel	
Subtotal	660.617		
TOTAL	673.956		

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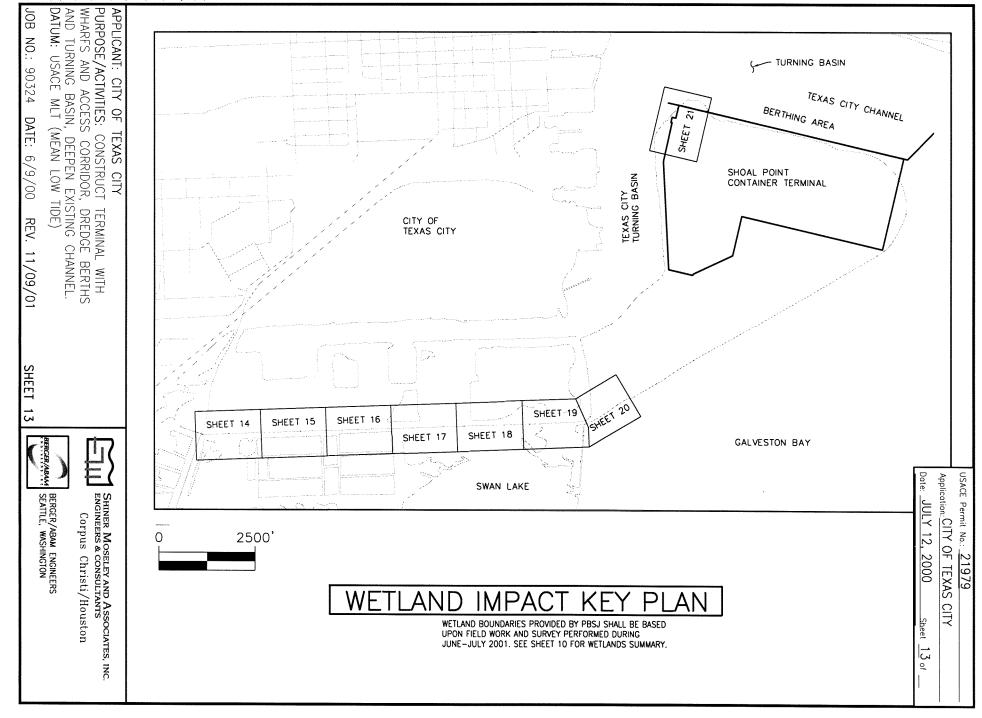
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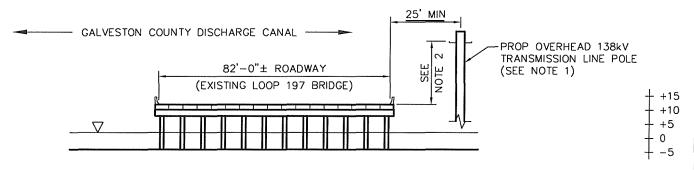




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Date: JULY 12, 2002 Sheet 23 of



A 138kV TRANSMISSION LINE CROSSING DISCHARGE CANAL 22 33 SCALE: N.T.S.

NOTES

- 1. PROPOSED TRANSMISSION LINE POLE NOT TO BE CONSTRUCTED WITHIN SHORELINE OF EXISTING GALVESTON COUNTY DISCHARGE CANAL.
- 2. LOW POINT OF PROPOSED TRANSMISSION LINE TO BE A MINIMUM OF 22-FEET ABOVE SURFACE OF EXISTING LOOP 197 BRIDGE CROSSING THE GALVESTON COUNTY DISCHARGE CANAL.
- 3. ELEVATIONS SHOWN IN USACE MLT DATUM.

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DATUM: USACE MLT (MEAN LOW TIDE)

JOB NO.: 90324 DATE: 7/12/02

REV.

SHINER MOSELEY AND ASSOCIATES, INC. ENGINEERS & CONSULTANTS

Corpus Christi/Houston



APPENDIX B

DREDGED MATERIAL MANAGEMENT PLAN (DRAFT REPORT), SHOAL POINT CONTAINER TERMINAL, BERGER/ABAM ENGINEERS, INC.

Draft Report







































Submitted to City of Texas City



Terminal

Submitted by

BERGER ABAM

E N G I N E E R S I N C.

June 2002

DREDGE MATERIAL MANAGEMENT PLAN SHOAL POINT CONTAINER TERMINAL

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Part A - General Information

1. INTRODUCTION

1.1 Purpose

The purpose of this 50-year Dredge Material Management Plan (DMMP) is to assist the U.S. Army Corps of Engineers (USACE) and the local sponsor (City of Texas City) to plan and support program funding for the placement of dredged material for the Texas City Channel, Texas City Turning Basin, Industrial Canal, Industrial Canal Turning Basin, and the Port of Texas City Users group. This DMMP will also incorporate new work dredged material quantities associated with the development of the Shoal Point Container Terminal. The plan years are from 2002 to 2052, inclusive.

The goal of this DMMP is to develop a plan that identifies a dredged material placement strategy through the year 2052 for any combination of new work and maintenance dredging for dredged material placement.

This document incorporates investigations, analyses, design, and monitoring to support the DMMP.

1.2 Location

Shoal Point is located within Galveston Bay, Texas, south of the Texas City Channel. The USACE currently has navigation servitude over the existing site and has been using the location for dredged material placement for more than 20 years.

The original 100-acre site was named Snake Island. In the 1980s, the USACE-Galveston District enlarged Snake Island (now called Shoal Point) to approximately 800 acres (see Figure 1).

1.3 Scope

This DMMP addresses new work and maintenance dredged material quantities associated with dredged material placement for the areas shown in Table 1.

Table 1 - DMMP Dredge Elements

Description	New Work Dredging	Maintenance Dredging
Texas City Channel		X
Texas City Turning Basin		X
Industrial Canal		X
Industrial Canal Turning Basin		X
Port of Texas City Users Group		X
Proposed Turning Basin	X	X
Proposed Berthing Area	X	X
Proposed Texas City Channel Deepening from -40.0 MLT to -45.0 MLT	X	

1.4 Horizontal and Vertical Control

The horizontal control for this DMMP is based on Texas State Plane, NAD 83, Texas South Central - 4204.

The vertical control is based on the USACE mean low tide (MLT) datum. All elevations are tied to Monument Q1204 (elevation 7.86 feet MLT), which is located along the Texas City Dike.

1.5 DMMP Overview

This document describes basic planning information relevant to the creation of four areas.

- Developed Areas Conversion of existing dredged material placement areas to commercial properties
- Beach Nourishment of the Texas City Dike
- Placement Areas (PA) Placement into existing upland areas
- Beneficial Use Sites (BUS) Creation of intertidal habitats

Figure 2 gives a brief geographic overview of the location of each of the four planning areas.

The developed areas are the areas in which the Shoal Point Container Terminal project will be located.

The beach nourishment site is located along the northern flank of the Texas City Dike. The USACE-Galveston District currently places dredged material in this location when required. They are identified as PA2 to PA4.

PA5 and PA6 are areas within the existing Shoal Point footprint which the USACE-Galveston District currently places dredged material.

BUS are intertidal habitat features that will be created from the efforts of dredged material placement.

Detailed geotechnical investigations and analyses will be required prior to the design and construction of any geographic areas. This investigation and analyses are considered to be outside the scope of this report.

1.6 Definitions

The following definitions are commonly used and referenced throughout this document.

- New Work Dredging Dredging associated with new construction. Generally, the material is undisturbed.
- Maintenance Dredging Dredging of material that accumulates due to normal sedimentation processes.
- Capital Grade Material Material that is native to the area and/or is generally classified as
 consolidated or overconsolidated. The majority of new work dredging has this grade of material.
- Maintenance Grade Material Material that is a result of siltation. This material is poorly consolidated. In the new work dredging areas, the top three feet were considered to be maintenance grade.

Figure 3 illustrates a typical section showing maintenance versus new work dredging. This figure also shows the location of maintenance grade and capital grade material.

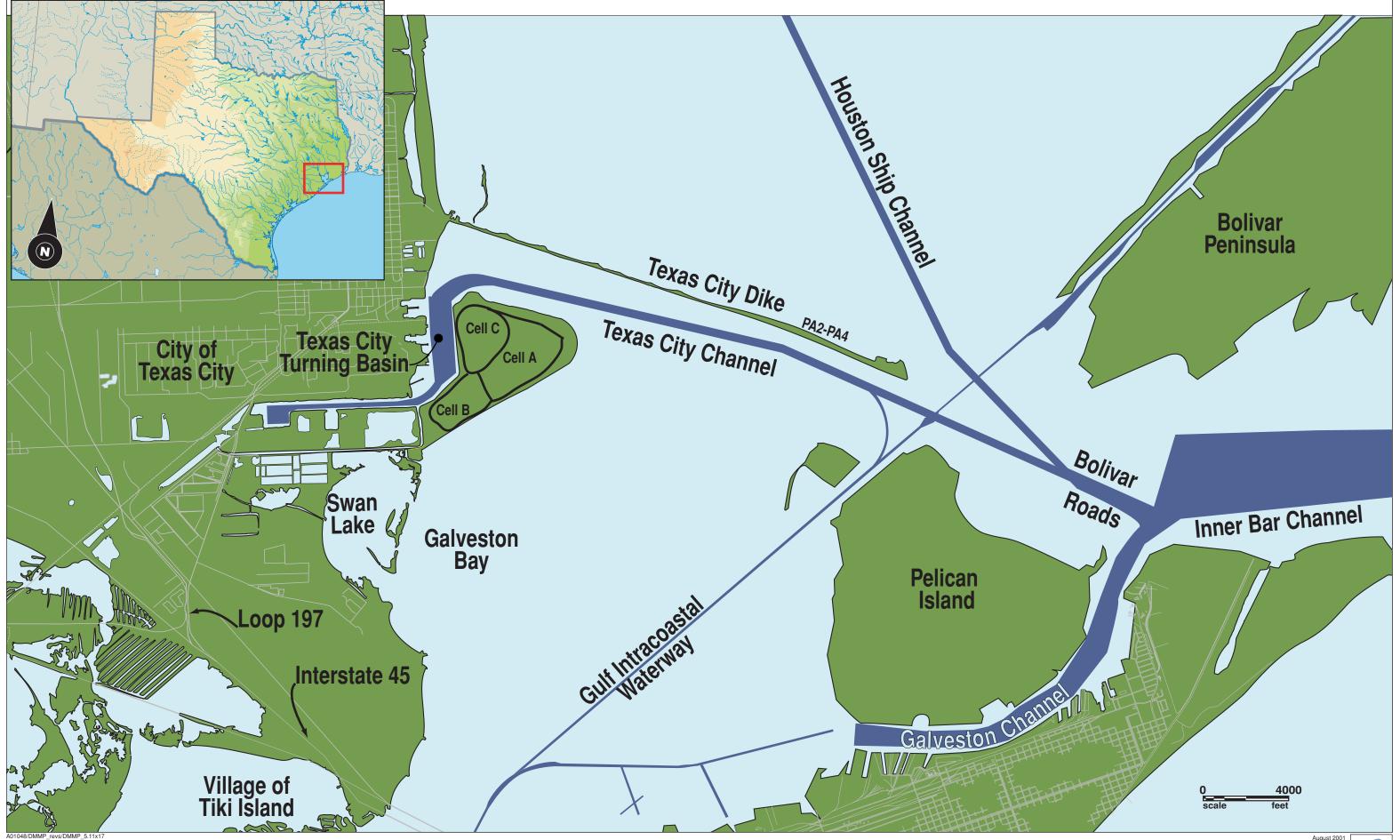




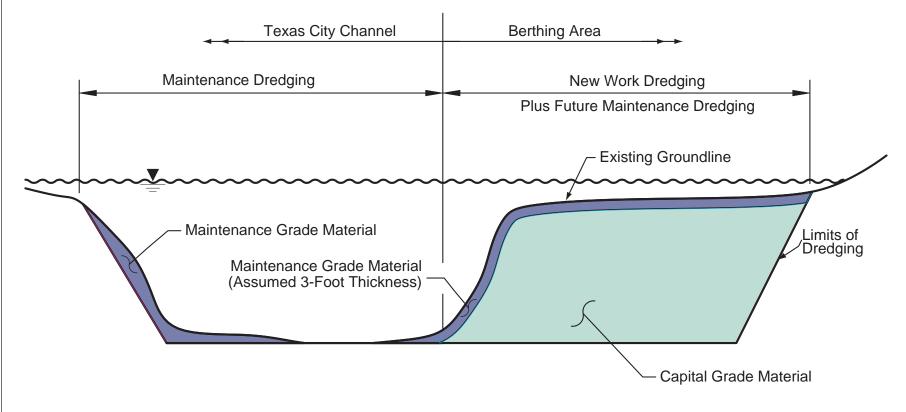






Figure 2 — Dredged Material Placement Plan









2. HISTORICAL AUTHORIZATION

2.1 History

On 4 March 1913, the Texas City Channel was first authorized by House Document (H. Doc.) 1390, 62nd Congress, 3rd Session. The first project allowed for the construction of a pile levee and a 30-foot-deep by 300-foot-wide channel. Authorization was passed on 3 July 1930 for a harbor 800 feet wide and a rubble-mound levee, as described in H. Doc. 107, 71st Congress, 1st Session. Improvements to these basic features began in 1935 and are summarized by date of authorization in Table 2.

Table 2 - Historical Texas City Channel Authorization

Date	Work Authorized	Authorizing Documents
4 Mar 1913	Construct a channel (300 feet wide by 30 feet deep) and a pile levee along its north side	H. Doc. 1390, 62nd Congress, 3rd Session
3 Jul 1930	Construct a harbor (800 feet wide and 30 feet deep) and a rubble-mound levee	H. Doc. 107, 71st Congress, 1st Session
30 Aug 1935	Extend rubble-mound levee to shoreline	Rivers and Harbors Committee Doc. 4, 73rd Congress, 1st Session
30 Aug 1935	Deepen channel and harbor to 32 feet	Rivers and Harbors Committee Doc. 46, 73rd Congress, 2nd Session
30 Aug 1936	Deepen channel and harbor to 34 feet	Rivers and Harbors Committee Doc. 62, 74th Congress, 1st Session
26 Aug 1937	Extend harbor 1,000 feet southward, 800 feet wide by 34 feet deep	Rivers and Harbors Committee Doc. 47, 75th Congress, 1st Session
30 Jun 1948	Deepen channel and harbor to 36 feet, widen channel to 400 feet and harbor to 1,000 feet, and change name of channel from "Channel from Galveston Harbor to Texas City, Texas" to "Texas City Channel"	H. Doc. 561, 80th Congress, 2nd Session
14 Jul 1960	Deepen channel and turning basin to 40 feet and construct a 16-foot-deep, 1.9-mile-long industrial canal	H. Doc. 427, 86th Congress, 2nd Session
12 Oct 1972	Widen the existing Texas City Turning Basin to 1,200 feet, including relocation of the basin 85 feet to the east; provide a 40-foot-deep channel in the Industrial Canal at widths of 300 to 400 feet, with a turning basin at the head of the canal 40 feet deep, 1,150 feet long, and 1,000 feet wide; ease the bend at the entrance to the canal; and reauthorize shallow-draft Industrial Barge Canal not incorporated in plan of improvement above	H. Doc. 199, 92nd Congress, 2nd Session (Section 201, PL 89-298)

Date	Work Authorized	Authorizing Documents
17 Nov 1986	Deepen the Texas City Turning Basin to 50 feet; enlarge the 6.7-mile-long Texas City Channel to 50 feet deep by 600 feet wide; establish 600 acres of wetlands; and develop water-oriented recreational facilities on a 90-acre enlargement of the Texas City Dike (not constructed)	Section 201, PL 99-662

2.2 Maintenance Dredging History

The USACE-Galveston District provided historical dredging records for the last 27 years. These historical records were used to predict future maintenance dredge requirements for the Texas City Channel, Industrial Canal, Texas City Turning Basin, and Industrial Canal Turning Basin. Table 3 summarizes the contract dredging construction duration and quantity for the last 27 years. A complete historical record of the various dredging contracts issued by the USACE-Galveston District is shown in Appendix A.

Table 3 - Dredge Quantity History

Start – Finish Dredge Year	Cyclical Volume (cy)	Cumulative Volume (cy)
Aug 1974 – Jan 1975	2,872,671	2,872,671
Jan – Apr 1977	2,596,531	5,469,202
Sep – Dec 1981	2,603,380	8,072,582
Aug 1984 – Apr 1985	2,840,649	10,913,231
Apr 1987 – Mar 1988	2,019,298	12,932,529
Dec 1989 – Mar 1990	1,330,095	14,262,624
Sep – Dec 1992	1,825,993	16,088,617
Dec 1995 – Mar 1996	1,922,783	18,011,400
Oct 1998 – Apr 1999	2,077,276	20,088,676
Apr – July 2001	1,314,035	21,402,711

2.3 Sediment Characteristics

The maintenance material dredged from the Texas City Channel has historically been composed of fine-grain silts and clays with a low percentage of sand. A higher percentage of sand has typically been found along the outer 4-miles of the channel from Bolivar Roads.

The characteristics of the soil types for this DMMP have been classified as capital or maintenance grades. Maintenance grade is defined as the initial 3 feet of poorly consolidated dredged material. Capital grade is defined as the undisturbed dredged material that is located below the poorly consolidated maintenance grade material (see Figure 2). The assumed bulk and compaction factors summarized in Table 4 and Table 5 are based on conversations with the USACE, and laboratory testing of various sediment samples.

Table 4 - Volumetric Factors for Interior Placement Areas

Material Grade Type	Bulk Factor	Consolidation Factor	
Capital	1.3	1.1	
Maintenance	1.5	0.9	

^{*}Note: All factors apply to neatline quantity.

Table 5 - Volumetric Factors for Levees

Material Grade Type	Bulk Factor	Consolidation Factor
Capital	1.05	1.05
Maintenance	1.50	0.50

^{*}Note: All factors apply to neatline quantity.

Primary consolidation for this document is defined as the settlement of the existing soil substrate prior to the placement of dredged material.

Primary consolidation was determined using a soil spring coefficient (k) and the unit weight and height of the dredged material being placed within the site. The buoyant unit weight of the material was used when the water table was above the foundation elevation. The buoyant unit weight of the material was used in all primary consolidation calculations, except PA5 and PA6. PA5 and PA6 used the unit weight for primary consolidation calculations.

The unit weight of the dredged material was determined to be 120 pcf. The buoyant unit weight of the dredged material was 58 pcf.

Secondary consolidation and desiccation for this document are defined as settlements that occur within the dredged material layers during each dredge cycle. Secondary consolidation and desiccation is directly related to the values presented in Table 4 and Table 5.

2.4 Existing Sediment Disposal Operation

The average maintenance cycle for the Texas City Channel and its surrounding areas is every three years. Approximately 2.34 million cubic yards of material is dredged from the Texas City Channel, Texas City Turning Basin, Industrial Canal, and Industrial Canal Turning Basin during an average maintenance cycle. Approximately 1.17 million cubic yards of sandy dredge material from Station 14+000 to Bolivar Roads is deposited onto the Texas City Dike as beach nourishment during each dredging cycle. This equates to approximately 50 percent of the total maintenance dredging activity performed along the Texas City Channel and its surrounding areas.

The remaining 1.17 million cubic yards of dredged material from each maintenance cycle is deposited within Shoal Point. The Port of Texas City and other private users of the waterway deposit an additional 108,000 cubic yards of material onto Shoal Point during each maintenance cycle.

3. DREDGING ELEMENTS

3.1 New Work Dredging

The Texas City Channel is currently maintained to -40.0 MLT. The Shoal Point Container Terminal project proposes to dredge the channel to -45.0 MLT. In addition, the Shoal Point Container Terminal project also proposes to dredge a new turning basin, as well as a new 6,000-foot-long berthing area. The specific locations of the proposed new work dredge elements are identified in Figure 2.

All initial dredging will be to -49.0 MLT. This represents a proposed depth of -45.0 MLT plus 2 feet of advanced maintenance and 2 feet of overdepth.

Table 6 shows the estimated neatline volumes for the proposed new work dredge elements.

Table 6 - Estimated New Work Dredge Volumes

Area	Volume (cy)
Proposed Texas City Channel deepening from -40.0 MLT to -45.0 MLT	2,400,000
Proposed Turning Basin to -45.0 MLT	750,000
Proposed Berthing Areas to -45.0 MLT	8,700,000
Total	11,850,000

3.2 Maintenance Dredging

The Texas City Channel, Industrial Canal, Industrial Canal Turning Basin, and Texas City Turning Basin accumulate sediment from Shoal Point and the surrounding areas. Table 7 gives the estimated annual maintenance dredge volumes for the Texas City Channel, Industrial Canal, Industrial Canal Turning Basin, and Texas City Turning Basin, as well as other areas of interest. These values were obtained by reviewing past dredging contracts (see Appendix A).

Table 7 - Estimated Annual Maintenance Volumes

Area	Volume (cy)
Texas City Channel, Texas City Turning Basin, Industrial Canal, and Industrial Canal Turning Basin	780,000
Port of Texas City	22,000
Sterling Chemicals	13,000
DOW Chemical (aka-Union Carbide Corporation)	<1,000
Total	816,000

For purposes of this document, a typical dredging cycle for the Texas City Channel and its surrounding areas is estimated to be three years.

Due to the erosive forces, Shoal Point is a large source of maintenance material along the Texas City Channel. Once the Shoal Point Container Terminal is constructed, the northern shoreline of Shoal Point will be capped with a slope revetment. This slope revetment will thereby minimize the erosive forces along the shoreline. As a result, it is not anticipated that any increase in maintenance volumes will occur as a result of the new work dredge elements previously discussed in this section.

Over the course of this 50-year DMMP, an estimated 40.8 million cubic yards of maintenance dredged material is anticipated.

4. FIELD INVESTIGATIONS

PBS&J conducted a marine remote-sensing survey of five areas in Galveston Bay, totaling approximately 4,000 acres. The survey took place during the period from March to August 2001 (see Table 8).

Table 8 - Remote-Sensing Study Areas

Study Area	Approximate Acreage (acres)	
Shoal Point Vicinity	3,208	
Proposed Turning Basin Vicinity	160	
Western Flank of Pelican Island	344	
Texas City Channel Margins	-	

This survey served several purposes, depending upon the area in question. All four areas were surveyed for submerged cultural resources. All areas, except the Texas City Channel margins, were surveyed for the purpose of mapping potential oyster habitat. PBS&J conducted a bathymetric survey of four areas, including the proposed Shoal Point Turning Basin and berthing areas.

4.1 Geotechnical

Fugro South, Inc. completed soil borings in the study area during September 2000 and May 2001. Locations, as well as preliminary soil boring logs, can be found in Appendix B. The drop cores were pushed by hand using a 2-inch stainless steel liner sampler. The liner sampler has a maximum penetration of 2 feet. Probing was performed at each location using a T-handle rod and extensions. The rods are about 3/4-inch in diameter and are made from stainless steel. There is a 15/16-inch tip on the rod that reveals additional data on the bottom soil composition.

4.2 Bathymetric Survey

Bathymetric data was recorded along parallel lines spaced at 200-foot intervals. The cultural resource and oyster surveys were conducted along parallel transects spaced at even 100-foot intervals and approaching as near to the shore as possible without endangering the survey vessel or towed equipment. Shallow areas were surveyed at high tide in order to maximize coverage. The total length of all survey lines was approximately 386 statute miles for both the oyster and cultural resource surveys and 80 miles for the bathymetric survey.

Bathymetric survey data was acquired using an Odom Hydrotrac echo-sounder with a 200-kHz narrow beam transducer. Water depths compensated for wave action of the transducer in real time using a TSS.335B Motion Sensor. The Hydrotrac was calibrated (bar checked) at the start and end of each survey day using a horizontal bar (pipe) suspended beneath the transducer.

Tidal data was collected using a Valeport VTM.710 Tide Gauge. The tide gauge was mounted on a U.S. Coast Guard ranger marker platform at the eastern margin of the proposed turning basin. Water level data was collected at 1-minute intervals throughout the period of the bathymetric survey. A temporary datum (nail) was established in a wooden piling above the tide gauge transducer. The elevation of the nail was determined to be 7.407 feet relative to the MLT datum. This elevation was determined by optical measurement from nearby Monument Q1204 (elevation

7.86 feet MLT) located on the Texas City Dike. The tide gauge elevation was measured by tape relative to the temporary datum.

4.3 Aerial Survey

John E. Chance and Associates, Inc. conducted an aerial survey of Shoal Point and the Swan Lake vicinity in June 2000, using Fli-Dar technology. The aerial survey was supplemented with a physical-features survey completed by Shiner Moseley and Associates in September 2000. A combination of these two sources of information was the foundation for which all capacity calculations are based. BERGER/ABAM provided contour mapping through the use of the computer program Land Development Desktop.

4.4 Side-Scan Sonar

Sonar data was recorded using a CODA data acquisition system and an Edgetech 500-kHz digital towfish. Survey lines were spaced at 100-foot intervals. The calculated offset position of the towfish was exported from the navigation computer to the sonar computer in real time; thus, all digital sonar images were geo-referenced.

Data post-processing, mapping, and analyses of sonar data were conducted in the field concurrently with the survey. Sonar mosaics were produced from the raw sonar data for specific areas containing suspected oyster habitat. Mosaics were then exported as a geotiff format. Appendix C shows the results of the side-can sonar mosaics.

4.5 Oyster Grab Sampling

Physical ground-truthing of suspected oyster habitat areas was conducted following completion of the sonar mapping task. Preliminary plots of oyster survey areas, showing potential oyster habitat, were used to guide the collection of numerous bottom samples for purposes of ground-truthing the sonar interpretations. A PBS&J biologist assisted with the ground-truthing by collecting data regarding the biological status of shell reefs. The results of ground-truthing confirmed the accuracy of the sonar interpretations. Appendix D shows the results of the oyster ground-truthing.

4.6 Magnetometer Survey

Magnetic survey data was acquired at 1-second intervals using a Geometrics G881 cesium magnetometer in a towed configuration.

Magnetic contour maps were prepared from the diurnally corrected data for all areas covered by this survey. These maps illustrate locations of potential submerged cultural resources, as well as possible dredging obstructions, pipelines, and wells. Based on the results of the magnetometer survey, eight potential shipwreck sites (see Table 9) were observed. Appendix E shows the location of the magnetic anomalies.

Table 9 - Magnetic Anomalies Found within the Study Area

Anomaly	East	North	Radius (ft)	
SP1	3278756.8	13697939.4	105	
SP2	3283872.4	13698668.6	117	
SP3	3290270.3	13705589.0	128	
SP4	3288002.2	13706819.9	83	
SP5	3287622.7	13706863.1	159	
PI1	3297184.9	13694617.4	144	
TCC1	3303884.0	13702287.0	118	
TCC2	3299316.7	13704407.0	106	

Five of the above magnetic anomalies are located in the Shoal Point (SP) survey area, one is located in the Pelican Island (PI) survey area, and two are located along the northern margin of the Texas City Channel (TCC). No anomalies are suspected as submerged cultural resources in the proposed turning basin or berthing area.

5. PLACEMENT STRATEGY

5.1 Developed Areas

The proposed Shoal Point Container Terminal will be constructed in three phases that will occupy approximately 400 acres on Shoal Point. The terminal will be paved at a nominal finished elevation of +18.0 MLT. Phase I will be constructed within existing Cell C, which is at an existing average elevation +20.5 MLT. Phases II and III will be constructed primarily within Cell A, which is at an existing average elevation +11.5 MLT (see Figure 1 and Figure 2).

Table 10 shows an estimate of the development timing for the Shoal Point Container Terminal.

Phase Estimated Estimated Estimated Dredge Element New Work Dredge **Operational** Dredge Year Year Volume (mcy) Ι 2002 2004 Berthing Area 3.0 (Berths 1 and 2) Π Berthing Area 3.1 2006 2008 (Berths 3 and 4) Turning Basin 0.75Channel 2.40 IIIBerthing Area 2.6 2014 2016 (Berths 5 and 6)

Table 10 - Preliminary Development Area Schedule

5.2 Beach Nourishment

Since 1986, approximately 1.17 million cubic yards of sandy dredged material from Station 14+000 to Bolivar Roads has been deposited onto the Texas City Dike to be used as beach nourishment during each three-year maintenance cycle. This equates to approximately 50 percent of the dredging activity performed along the Texas City Channel and its surrounding areas. It is assumed this practice will continue throughout the course of this 50-year DMMP.

5.3 Placement Areas (PA)

The PA will be used throughout the 50-year maintenance plan. PA5 will be constructed in existing Cell B on Shoal Point and will likely be dedicated to the maintenance dredging for the Port of Texas City Users Group, as well as dredged material from the Industrial Canal and Industrial Canal Turning Basin. PA6 on Shoal Point will be constructed within existing Cell A and Cell B and will likely be dedicated to the maintenance dredging from the Texas City Channel (see Figure 1 and Figure 2).

5.4 Beneficial Use Sites

Approximately 1,353 acres of BUS will be developed during the course of the 50-year plan (see Table 11).

Table 11 - BUS Summary

BUS	Area (acres)	Existing Elevation (MLT)
Swan Lake	363	-0.9
Pelican (PBUS)	99	-2.3
Shoal Point BUS 1 (SPBUS1)	357	-7.2
Shoal Point BUS 2 (SPBUS2)	115	-8.0
Shoal Point BUS 3 (SPBUS3)	138	-7.3
Shoal Point BUS 4 (SPBUS4)	120	-8.0
Shoal Point BUS 5 (SPBUS5)	161	-8.9
Total	1,353	-

6. CONCEPTUAL SITE PLANNING

This 50-year DMMP includes a neatline dredge volume of approximately 52.7 million cubic yards of material. Approximately 19.5 million cubic yards of material will be used as beach nourishment along the Texas City Dike (PA2 to PA4) and the remaining 33.2 million cubic yards will be placed within either the PA or the BUS.

Figure 4 illustrates a conceptual schedule for the elements of this DMMP.

Appendix G shows a detailed schedule of dredged material placement activity for the years covered within this 50-year DMMP.

Table 12 gives a complete breakdown of the anticipated dredged material.

Material Grade Type

Volume (mcy)

Maintenance

43.4

Capital

9.3

Table 12 - 50-Year DMMP Quantities

6.1 Developed Areas

The Shoal Point Container Terminal will likely be implemented in three phases. Each operational phase will require dredging, regrading, and levee construction to be performed in order to obtain finished grade. The levees constructed on Shoal Point will typically be constructed using existing onsite material that will have slopes no steeper than 3H to 1V and a minimum crown width of 20 feet.

Approximately 1.6 million cubic yards of capital grade and 0.2 million cubic yards of maintenance grade material will be used as subgrade (fill) material for the development of Phases II and III. This work will be accomplished with material removed from the berthing area during Phase I dredging.

6.1.1 Phase I

A new access corridor at an approximate elevation between +12.0 and +18.0 MLT will be constructed, which will define the boundaries of PA5 and PA6. The 125-acre footprint of Phase I will be initially surcharged to consolidate material and subsequently regraded to a nominal elevation of +15.0 MLT. Surcharge and excess material will be relocated from the Phase I area to the Phase II and III areas. The final elevation of the paved site will be +18 MLT.

6.1.2 Phase II

The existing dredged material and surcharge from Phase I will be used as the subgrade material for the additional 125-acre footprint of Phase II. Surcharge and excess material will be relocated from the Phase II area to the Phase III area. The final elevation of the paved site will be +18 MLT.

6.1.3 Phase III

The existing dredged material and surcharge from Phases I and II will be used as the subgrade material for the additional 150-acre footprint of Phase III. Surcharge and excess material will be relocated from Phase III to PA6. The final elevation of the paved site will be +18 MLT.

¹ Technical Report DS-78-11, Guidelines for Dewatering/Densifying Confined Dredged Material, Army Engineer Waterways Experiment Station, Vicksburg, MS, September 1978

6.2 Beach Nourishment

Sandy dredge material from Station 14+000 to Bolivar Roads will be placed along the Texas City Dike as beach nourishment. The placement will be unconfined near the north flank of the Texas City Dike.

It is anticipated that approximately 19.5 million cubic yards of sandy maintenance material will be deposited along the Texas City Dike over the course of this 50-year DMMP.

6.3 Placement Areas

PA5 and PA6 are located within the existing area of Shoal Point not occupied by the proposed Shoal Point Container Terminal.

The new levees constructed on Shoal Point will be composed of material that will have slopes no steeper than 3H to 1V and a minimum crown width of 20 feet.

The maximum disposal grade elevations in the core will be set at +26.0 MLT. The existing levees will be increased to match the site grade elevation, plus 2 feet for allowable ponding and an additional 2 feet for freeboard. The maximum levee elevation within Shoal Point will be +30.0 MLT. This preliminary elevation was determined based on laboratory testing of the existing material. Increased elevations may be possible.

6.3.1 PA5

PA5 is approximately 90 acres and is bounded by the southern limits of Shoal Point and to the north by the container terminal. The toe of the PA5 levee will have a 10-foot buffer from the toe of slope of the access corridor.

Approximately 2.44 million cubic yards of maintenance grade material is expected to be deposited within PA5 over the course of this 50-year DMMP.

6.3.2 PA6

PA6 is approximately 160 acres and is bounded by the southern limits of Shoal Point and the container terminal to the north. The toe of the PA6 levee will have a 10-foot buffer from the toe of slope of the access corridor.

Approximately 6.60 million cubic yards of maintenance grade material is expected to be deposited within PA6 over the course of this 50-year DMMP.

6.4 Beneficial Use Sites

The intent of the BUS is to create an intertidal marsh habitat to produce an overall net benefit to the continued production of fish and wildlife resources. Over time, the sites are expected to develop similarly to nearby existing natural intertidal habitat. Features will be constructed to minimize impacts to other natural habitats and to avoid impacts to navigational requirements.

All BUS will initially start as confined dredged material containment areas. The design guideline for the containment areas will be the "Confined Disposal of Dredged Material Engineer Manual."² After the areas have reached a predetermined target elevation, the areas will be decommissioned and the areas will be contoured, planted, and shaped, if necessary, to form an intertidal habitat.

The following BUS acreage areas described are measured within the centerline of the confining levee.

² EM 1110-2-5027 Confined Disposal of Dredged Material, U.S. Army Corps of Engineers, 30 September 1987

The design of the BUS is relatively new with limited existing projects to evaluate. The proposed designs are based on the successes of existing demonstration projects. Guidelines for the intertidal habitat design are dynamic and modifications may be necessary to meet all beneficial use objectives.

Where required, confining levees will be composed of material that will have side slopes no steeper than 5H to 1V and a minimum crown width of 30 feet. The levee will have a minimum elevation of +8.0 MLT. The final BUS interior grade elevations will be developed from an elevation survey of a nearby reference marsh prior to the final filling of each new cell.

All of the BUS will be located within a 2.5-mile radius of the Shoal Point dredge elements to minimize the costs of transport and the degradation of the dredged material over long distances. The dredged material will likely be pumped by means of a suction cutter-head dredge to all of the BUS areas.

6.4.1 Swan Lake

The Swan Lake BUS is located within the geographic vicinity of the existing Swan Lake.

The removal of groundwater during the 1960s caused subsidence of the areas surrounding and within the City of Texas City, resulting in a net loss of intertidal habitat.

The conceptual plan for improving Swan Lake is to raise the grade to the 1960s level and to create approximately 363 acres of intertidal habitat in staged development. Table 13 shows the estimated schedule for the development of the Swan Lake BUS.

Capital grade material will be used in restoration of Swan Lake, unless other materials are determined through coordination with the natural resource agencies to be appropriate for the success of the restored marsh.

Material Grade (mcy)* Area (Acres) Event Year Capital Maintenance Phase I 2002 45 + TNRCC0.400Restoration Project Phase II 2006 318 1.48 Decom. 2006 363 1.88

Table 13 - Preliminary Swan Lake BUS Schedule

6.4.2 Pelican Island

The Pelican Island BUS is 3.8 miles southeast of Shoal Point and approximately 1.0 mile south of the Texas City Channel. The capital and maintenance grade material from deepening the Texas City Channel along the outer reaches will be placed at the Pelican Island BUS. The dredged material will be used to create approximately 99 acres of intertidal habitat.

Table 14 illustrates the anticipated neatline volume of dredged material and decommissioning date for the Pelican Island BUS.

^{*}Indicates a neatline volume.

Table 14 - Preliminary Pelican Island BUS Schedule

	Estimate		Area	Levee Perimeter (feet)	Material Grade (mcy)*	
Event	d Year	Location	(Acres)		Capital	Maintenance
Phase II	2006	Levees Interior	- 99	5,750	0.185 0.200	0.640
Decom.	2006		99	5,750	0.385	0.640

^{*}Indicates a neatline volume.

6.4.3 Shoal Point

■ SPBUS1

Capital and maintenance grade material will be used to create a 357-acre intertidal habitat. Capital grade material will be used to create the levees.

Table 15 illustrates the anticipated neatline volume of dredged material and decommissioning date for SPBUS1.

Table 15 - Preliminary SPBUS1 Schedule

	Estimated		A	Levee Perimeter (feet)	Material Grade (mcy)*		
Event	Estimated Year	Location	Area (Acres)		Capital	Maintenance	
Phase I	2002	Levees	-	13,350	0.84	-	
Maint.	2004	Interior	357	-	-	1.17	
Phase II	2006	Interior	-	-	1.70	2.37	
Maint.	2009	Interior	-	-	-	0.900	
Decom.	2009		357	13,350	2.54	4.44	

^{*}Indicates a neatline volume.

SPBUS2

Capital and maintenance grade material will be used to create a 115-acre intertidal habitat. Capital grade material will be used to create the levees.

Table 16 illustrates the anticipated neatline volume of dredged material and decommissioning date for SPBUS2.

Table 16 - Preliminary SPBUS2 Schedule

	Estimated.		A	Levee	Material Grade (mcy)*	
Event	Estimated Year	Location	Area (Acres)	Perimeter (feet)	Capital	Maintenance
Phase II	2006	Levees	-	6,950	0.465	-
Maint.	2009	Interior	115	-	-	0.270
Maint.	2012	Interior	-	-	-	1.07
Phase III	2014	Interior	-	-	0.665	0.110
Decom.			115	6,950	1.13	1.45

^{*}Indicates a neatline volume.

SPBUS3

Capital and maintenance grade material will be used to create a 138-acre intertidal habitat. Capital grade material will be used to create the levees.

Table 17 illustrates the anticipated neatline volume of dredged material and decommissioning date for SPBUS3.

Table 17 - Preliminary SPBUS3 Schedule

	T		_	Levee	Material Grade (mcy)*	
Event	Estimated Year	Location	Area (Acres)	Perimeter (feet)	Capital	Maintenance
Phase III	2014	Levees Interior	138	6,650	0.425 0.170	0.0550
Maint.	2015	Interior	-	-	-	1.17
Maint.	2018	Interior	-	-	-	1.13
Decom.	2018		138	6,650	0.595	2.36

^{*}Indicates a neatline volume.

SPBUS4

Capital and maintenance grade material will be used to create a 120-acre intertidal habitat. Capital grade material will be used to create the levees.

Table 18 illustrates the anticipated neatline volume of dredged material and decommissioning date for SPBUS4.

Table 18 - Preliminary SPBUS4 Schedule

	Estimated		A	Levee	Material Grade (mcy)*	
Event	Estimated Year	Location	Area (Acres)	Perimeter (feet)	Capital	Maintenance
Phase III	2014	Levees	-	9,250	0.620	-
Maint.	2021	Interior	120	-	-	1.170
Maint.	2024	Interior	-	-	-	1.170
Decom.	2024		120	9,250	0.620	2.34

^{*}Indicates a neatline volume.

SPBUS5

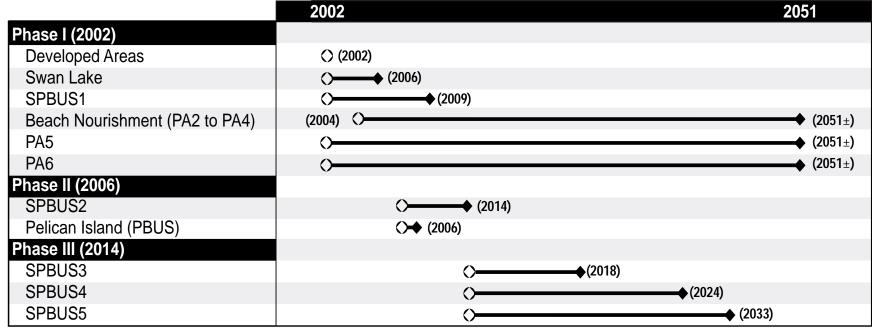
Capital and maintenance grade material will be used to create a 161-acre intertidal habitat. Capital grade material will be used to create the levees.

Table 19 illustrates the anticipated neatline volume of dredged material and decommissioning date for SPBUS5.

Table 19 - Preliminary SPBUS5 Schedule

	E-12		A	Levee	Material Grade (mcy)*	
Event	Estimated Year	Location	Area (Acres)	Perimeter (feet)	Capital	Maintenance
Phase III	2014	Levees	-	7,450	0.555	-
Maint.	2027	Interior	161	-	-	1.17
Maint.	2030	Interior	-	-	-	1.17
Maint.	2033	Interior	-	-	-	1.10
Decom.	2033		161	7,450	0.555	3.44

 $[*]Indicates\ a\ neatline\ volume.$



- Start Construction
- ◆ Decommission

New Work Dredging Schedule of Events

Phase I — Berthing Area

Phase II — Berthing Area, TCIT Turning Basin, Texas City Channel

Phase III — Berthing Area





Part B - Beach Nourishment

1. GOALS AND OBJECTIVES

The goal and objective of the beach nourishment program is to reinforce and replace material that has been removed from the Texas City Dike due to erosive forces.

2. DESIGN GUIDELINES

Since 1986, approximately 1.17 million cubic yards of sandy dredged material from Station 14+000 to Bolivar Roads has been deposited onto the Texas City Dike (PA2 to PA4) to be used as beach nourishment. This equates to approximately 50 percent of the dredging activity performed along the Texas City Channel and its surrounding areas.

Since its creation, the Texas City Dike has had considerable day use for fishing, swimming, wind surfing, and personal watercraft. Critical to its continued use is the maintenance of the beach along the north side of the dike. This DMMP will continue to utilize this beneficial use of material along the dike.

3. PERFORMANCE STANDARDS

In beach nourishment, strategic placement of dredge discharge pipes and post-consolidation contouring can lead to the desired landscape-level geomorphology.

4. MONITORING PLAN

Surveys of the beaches will be conducted as necessary prior to and after each dredge cycle.

Part C - Placement Areas

1. GOALS AND OBJECTIVES

The goal of the PA is to maximize the use of existing upland placement areas within Shoal Point.

The levee elevations will be designed for ponding and required freeboard during operation.

2. DESIGN GUIDELINES

The proper dredged material placement, consolidation, and levee construction are critical for establishing a specified disposal elevation. Controlling these parameters is difficult since rainfall, high evaporation, and evapotranspiration rates influence the characteristics of the soil. Excess water should be decanted off the site to prepare for the placement of the next dredge cycle.

The PA will be used throughout the 50-year maintenance cycle. PA5 will be constructed in existing Cell B and will be primarily dedicated to the maintenance dredging for the Port of Texas City Users Group and maintenance dredging for the Industrial Canal and Industrial Canal Turning Basin. PA6 will be constructed in existing Cells A and B and will be primarily dedicated to the maintenance dredging from the Texas City Channel.

The design and maintenance requirements for the PA shall be based on current USACE office practice and USACE EM-1110-2-5027². Supplemental design information is shown below.

2.1 Factor of Safety

A factor of safety of 2.0 shall be used in the design of the levees to prevent sliding and overturning.

2.2 Levee Construction

The levees constructed within Shoal Point will be composed of material that will have slopes no steeper than 3H to 1V and a minimum crown width of 20 feet.

2.3 Minimum Freeboard

For planning purposes, the maximum interior grade elevation for the area is +26.0 MLT. Existing levees will be raised to match the interior grade elevation, plus 2 feet for allowable ponding and an additional 2 feet for freeboard. The assumed maximum levee elevation within Shoal Point is +30.0 MLT. Higher elevations may be possible.

2.4 Erosion Control

Vegetation shall be used for erosion control along the outer flank of the levees, where necessary.

2.5 Shore Protection

Shore protection shall be used to prevent erosion due to wave action.

Shore protection shall be designed for the 25-year storm.

3. PERFORMANCE STANDARDS

3.1 Water Quality

Water quality shall comply with all federal, state, and local laws, rules, and regulations governing the discharge of materials into navigable waters, including approval of the appropriate state water quality board for the discharge of any materials and wastes into navigable waters within its jurisdiction.

4. MONITORING PLAN

Surveys of the PA levees shall occur before each dredge cycle, or as indicated by current USACE office practice. The levees shall be designed to have a minimum of 2 feet for freeboard after the completion of a dredge cycle. The levees constructed on Shoal Point will be composed of material that will have slopes no steeper than 3H to 1V and a minimum crown width of 20 feet.

Part D - Beneficial Use Sites

1. GOALS AND OBJECTIVES

A balance between fixed-design and a completely self-organizing system will be used in creating the BUS. BUS planning will consist of goals, objectives, performance standards, monitoring methods, and remedial actions. Table 20 describes the BUS planning system.

Table 20 - Self-Organization Theory

Term	Definition		
Goals	General statement about desired project direction and outcomes		
Objectives	Specific statement about desired project outcomes		
Performance Standards	Observable or measurable attributes that can be used to determine if an intertidal habitat project meets the objectives intended for the project		
Monitoring Methods	Specific approaches to determine if the performance standards have been met		
Remedial Action	Actions to be taken if performance standards are not met within the desired period		

Figure 5, Figure 6, Figure 7, Figure 8, Figure 9, and Figure 10 demonstrate the process of creating a successful BUS.

Figure 5 — Stabilization of Dredged Volume

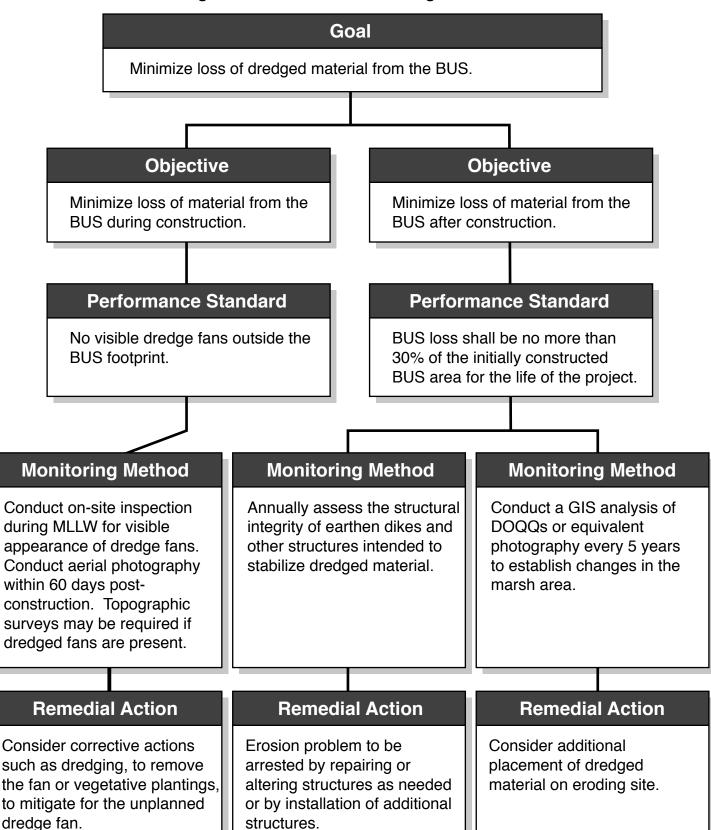


Figure 6 — Dredged Material Volume

Use dredged material to create BUS similar to nearby natural marshes, including both high and low marsh, without adversely impacting sensitive habitats while minimizing impacts.

Objective

Accommodate required volume of dredged material.

Performance Standard

Elevations within the BUS and settlement of the dredged material shall fall within 90% of the consolidation projections.

Monitoring Method

Sampling of the dredged material shall be taken after the BUS is approximately 50% full. The samples shall be tested for consolidation and bulking factors.

Remedial Action

Modify placement within the BUS, as needed, to accommodate changes in projected volume to achieve target elevations.

Figure 7 — Vegetation

Use dredged material to create a BUS similar to nearby marshes, while minimizing impacts to other ecologically important habitats.

Objective

Support vegetation communities similar to those typical of nearby natural *Spartina alterniflora* marshes.

Performance Standard

Created marshes shall not support undesirable plant species.

Performance Standard

No more than 20% of total vegetative cover inclusive of bare ground will be high marsh species, such as Spartina patens, Batis maritima, Borrichia frutescens, Monoanthochloe littoralis, Salicornia ssp., and Lycium carolinanum.

Performance Standard

80% of the total vegetative cover shall be tall form *Spartina alterniflora*.

Monitoring Method

Conduct annual site visits with local resource agency personnel to determine species present and extent of vegetative cover.

Remedial Action

Removal or herbiciding of undesirable vegetation.

Monitoring Method

Conduct a ground truthed GIS evaluation of DOQQs or equivalent photography to determine vegetative cover every 5 years.

Remedial Action

Consider recontouring to support appropriate vegetation communities. Consider adding additional dredged material if site is too low to support desired vegetation. Consider excavation and vegetative plantings if area is too high. Consider enhancing tidal exchange.

Figure 8 — Fish and Wildlife

Use dredged material to create BUS similar to nearby natural marshes, including both high and low marsh, without adversely impacting critical habitats while minimizing impacts.

Objective

Develop habitat for native fish and wildlife.

Performance Standard

Within 20 years of habitat construction, edge to area ratio is equal to or greater than the median edge to area ratios of nearby natural marshes. The created marsh shall have at least 40% of the natural marsh edge to area ratio by year 5 and at least 20% additional edge for each 5 year cycle.

Monitoring Method

Conduct a GIS analysis of DOQQs or equivalent photography every 5 years after initial habitat construction to determine edge to area ratios compared to a typical nearby natural marsh.

Remedial Action

Recontouring shall be used to establish additional marsh edges to meet the performance standard.

Performance Standard

Within 20 years of initial marsh construction, area of open water habitat with connection to tidal flushing is equal or greater than median areas of open water habitat with connection to tidal flushing in nearby natural marsh sites. The created marsh shall have at least 40% of the natural marsh tidal connection by year 5 and at least 20% additional for each 5 year cycle.

Monitoring Method

Conduct a GIS analysis of DOQQs or equivalent photography every 5 years. Area comprised of open water habitat with tidal connections shall be compared to a typical nearby natural marsh.

Remedial Action

For future dredged material placement correct design issues for the edge to area ratios, slopes, elevations, and habitat connected to tidal flushing.

Performance Standard

Within 20 years of initial marsh construction, isolated pond area total area ratio shall be equal to or greater than the median isolated pond area ratios of nearby natural marshes. The created marsh shall have at least 40% of the natural marsh isolated pond area by year 5 and at least 20% additional isolated pond area for each 5 year cycle.

Monitoring Method

Conduct a GIS analysis of DOQQs or equivalent photography every 5 years to determine isolated pond area to total area ratios for both the created and the natural reference mashes.

Remedial Action

Recontouring the created intertidal habitat area to construct additional isolated ponds should be considered to meet the performance standard.

Performance Standard

Mean overall density of transient and resident fish and crustaceans are not significantly different from nearby marshes.

Monitoring Method

Fisheries censussing via trapping with a sampling tool design shall be used to compare 5-year mean densities.

Remedial Action

Investigations should be undertaken to determine why differences exist between the marshes and corrective measures should be implemented.

Performance Standard

Mean overall density and diversity of birds along marsh/water edge shall be at least 60% of that found in nearby natural marshes during the same season and water condition within 10 years after marsh fill placement.

Monitoring Method

Traverse main tidal creeks of the created and natural reference marshes for a standard distance (minimum 1500 ft.) during the early morning hours in early April, late June, late September and late January. Identify species and count all birds.

Remedial Action

Investigations shall be undertaken to determine why differences exist between the marshes and corrective measures should be implemented.

Figure 9 — Hydrology

Achieve target elevations necessary to permit intertidal fluctuations of bay waters within the BUS.

Objective

Create BUS with water depths similar to those found in nearby natural marshes.

Objective

Create BUS with water quality similar to those found in nearby natural marshes.

Objective

Create BUS with tidal flow rates similar to those found in nearby natural marshes.

Performance Standard

Depth of tidal inlets, creeks, and connected ponds shall be at least 80% of the average depth of those found in nearby natural marshes within 5 years of placement.

Performance Standard

Measurements of water temperature, dissolved oxygen, and salinity of subtidal habitats in the BUS shall be within 10% of the mean values measured in nearby natural marshes within 5 years of placement.

Performance Standard

Volume of water exchanged during a tidal cycle in the BUS shall be within 30% of that observed in nearby natural marshes of similar size within 5 years of placement.

Monitoring Method

Survey water depths of tidal creeks relative to local sea level at 100 ft., 1000 ft., and 1500 ft. from the main tidal inlet into the BUS and reference marsh. Survey nontidal pond bottom elevations and overflow elevations relative to local sea level in the BUS and reference marsh.

Monitoring Method

Utilize continuous monitoring and recording devices for 7 consecutive days within similar habitats (creeks, tidal ponds, and nontidal ponds) at the BUS and natural marsh.

Monitoring Method

Flow meters shall be deployed 500 ft. from the main tidal opening during the spring or fall when the bay is experiencing only one low and high tide a day.

Remedial Action

Excavate ponds and tidal creeks to comparable depths as reference marsh.

Consider lowering target elevation of future BUS.

Remedial Action

Increase tidal exchange by enlarging tidal inlet and/or by excavating additional ponds and creeks to greater depths. Consider lowering target elevation of future BUS.

Figure 10 — Swan Lake Restoration (not including mitigation site)

Goal Use dredged material to restore Swan Lake to historic (1964) marsh coverage as depicted in 1964 aerial photography. **Objective** Restore 363 acres of Spartina alterniflora marsh in phase II of the Shoal Port Container facility. **Performance Standard Performance Standard** 80% of BUS is within elevation 50% vegetative cover at 3 years. range of existing natural marsh 70% vegetative coverage of within Swan Lake. restored area within 5 years of final elevation grading. **Monitoring Method Monitoring Method** Conduct post-construction Conduct a GIS analysis of elevation survey within 120 DOQQs or equivalent days of completion of final photography at years 3 and elevation grading. 5 to determine amount of vegetative cover.

Remedial Action

Consider recontouring as necessary to achieve performance standard.

Remedial Action

Additional plantings may be necessary to achieve 5 year vegetative goal.

Remedial Action

Replant with additional plantings in areas that did not achieve the 70% vegetative coverage.

2. DESIGN GUIDELINES

The intent of the BUS is to create an intertidal marsh habitat to produce an overall net benefit to the continued production of fish and wildlife resources. Over time, the sites are expected to develop similarly to nearby existing natural intertidal habitats. Features will be constructed to minimize impacts to other natural habitats and to avoid impacts to navigational requirements.

The design of the BUS is relatively new with limited existing projects to evaluate. The proposed designs are based on the successes of existing demonstration projects. Guidelines for the intertidal habitat design are dynamic and modifications may be necessary to meet all beneficial use objectives.

Where required, confining levees will be composed of material that will have side slopes no steeper than 5H to 1V and the crown of the levee will have a minimum crown width of 30 feet. The levee will have a minimum elevation of +8.0 MLT. The final BUS interior grade elevations will be developed from an elevation survey of a nearby reference marsh prior to the final filling of each new marsh cell.

All of the BUS will be located within a 2.5-mile radius of the dredge elements to minimize the costs of transport and the degradation of the dredged material over long distances. The dredged material will likely be pumped by means of a suction cutter-head dredge to all of the BUS areas.

The design and maintenance requirements for the BUS shall be based on current office practice and USACE EM-1110-2-5027². Supplemental design information is shown below.

2.1 Selection of Reference Marshes

The selection of nearby natural marshes for comparison to dredged material intertidal habitats shall be developed. Natural reference marshes should be within 5 miles of the dredged material marsh being assessed and should have a size similar to that of the dredged material habitat being assessed. If more than one dredged material habitat is being assessed, the same natural marshes should be spread across the area encompassed by the dredged material habitat and should have a size similar to the largest dredged material habitat being assessed. Exact locations of natural marshes should be selected randomly. A random number table can be used to identify the latitude and longitude for center points within the general area to be included. Once these center points are established, they will have to be adjusted so that the arbitrary boundary around the natural reference marshes generally follows the shoreline. Subjective assessments of the amount of edge-to-area ratio showing up in aerial photographs should not be allowed to affect selection of natural reference marshes.

Selection of the reference marshes shall be discussed and agreed with the federal, state, and local officials that will be providing technical review during the creation and completion of the BUS. Likely agencies are the Environmental Protection Agency (EPA), USACE, National Marine Fisheries Service (NMFS), U.S. Fish and Wildlife Service (USFW), U.S. Coast Guard (USCG), Texas Natural Resource Conservation Commission (TNRCC), Texas Parks and Wildlife Department, and the State of Texas General Land Office.

2.2 Geomorphology and Site Configuration

The configuration of sites relative to surrounding natural features shall be considered. Attempts shall be made to blend new habitats with existing intertidal habitats and landforms. Features at the boundaries of projects shall be considered, such that the construction of a site does not cause adverse conditions in adjacent areas. The interactions between existing natural channels, holes, or shoals and the project shall be considered. Flows through an adjacent channel or cut could undermine a project structure, and blocking an existing channel cut could have implications for off-site biological communities. The flow of rainwater from a newly constructed site into or onto an adjacent site shall not be allowed to result in a change to the adjacent habitat.

2.3 Environmental Compliance

State and federal agencies will be likely providing technical reviews during the creation and completion of the BUS. Agencies that may be involved in the process are EPA, USACE, NMFS, USFW, USCG, TNRCC, Texas Parks and Wildlife Department, and the State of Texas General Land Office.

2.3.1 Water Quality

Water quality shall comply with all federal, state, and local laws, rules, and regulations governing the discharge of materials into navigable waters, including approval from TNRCC for the discharge of any materials and wastes into navigable waters within its jurisdiction.

2.4 Field Investigations

2.4.1 Geotechnical

Laboratory testing as described in EM-1110-2-5027² shall be employed. Soil borings in the BUS area shall be completed prior to BUS construction. Borings will determine the soil classifications and consolidation characteristics.

2.4.2 Bathymetry

Bathymetric survey shall be completed before the placement of dredged material. The bed of the BUS may be contoured prior to placement of the dredged material with the intent that the surface of the dredged material will roughly reflect the underlying bathymetry.

2.5 Structure Functionality and Integrity

2.5.1 Erosive Forces

Exposure to wind- and boat-induced waves, and ambient- and boat-induced currents shall be considered. Currents are important, particularly around cuts between islands and other constrictions, which may have a hydraulic gradient across them.

The 25-year storm shall be considered for the design of all elements unless otherwise noted.

A detailed hydrodynamic model shall be performed to determine the erosive forces that could occur as a result of the proposed intertidal habitats. The model shall take into account the construction sequencing of the intertidal habitats.

2.5.2 Dredged Material Placement Techniques

The natural marshes in a given area may have considerable variation in topography. Creating the topographic structure in the same detail will be difficult with newly placed dredged material. Techniques to achieve desired elevations and topography that are feasible and economical will be researched. The recommended method to achieve target elevation ranges and topographic characteristics is during the dredged material placement process. The sites shall then be allowed to consolidate and develop vegetation communities. Following this period, an evaluation of the sites shall be made to determine if additional work is necessary to develop the site.

Prior to the design and construction of each successive BUS site, a review of the "lessons learned" from the previous marsh cells should be reviewed to refine design parameters and construction techniques.

2.6 Surface Elevations

The final BUS interior grade elevations will be developed from an elevation of a nearby reference marsh prior to the final filling of each BUS.

2.7 Surface Features

2.7.1 Levees

Confining levees shall be composed of material that will have side slopes no steeper than 5H to 1V and the crown of the levee shall have a minimum crown width of 30 feet. The levee shall have a minimum elevation of +8.0 MLT. Levees elevations shall be designed for 2 feet of ponding and an additional 2 feet for freeboard.

During the construction of the levees around the perimeter of the intertidal habitat, interior levees may be constructed which would control the movement of the dredged material through the site, causing material to settle in some areas and not in others. Broad topographic or elevation changes can be controlled in this way. Other features could be created prior to placement to add topographic relief to the site, such as islands or ring levees. Additionally, once the dredged material has filled the site to a specified level upon which small topographic features are built, small surface features, such as water filled tubes, hay bales, and earthen berms, might be positioned to direct flows into or away from specified areas.

Interior levees are commonly used in contained placement facilities to enhance settling². The levees direct the dredged material inflow circuitously through the placement area forcing water to remain in the facility longer before reaching the outflow structure. The volume of sediment that settles in the facility is increased.

Shore Protection

Shore protection shall be designed for the 25-year storm.

Factor of Safety

A minimum factor of safety of 2.0 shall be used in the design of the levees to prevent sliding and overtopping.

2.7.2 Vegetation

While vegetation communities will evolve over time to reflect prevailing environmental (physical and biological) conditions, initial planting of appropriate vegetation assemblages can prevent, or at least delay, problems with establishment of nuisance plant species or dominance by one or a small number of species. Planting can contribute to accelerated consolidation of dredged material through evapotranspiration, protection from erosion by development of a root mat, rapid development of habitat structure to support birds and other wildlife, and potentially improved intertidal habitat functioning in terms of biogeochemical cycling and nutrient dynamics.

The ultimate goal of the BUS is for habitat vegetation to abundantly cover the landscape. The following plants are considered important contributors to a plant community structure: *Batis maritima, Borrichia frutescens, Lycium carolinanum, Monoanthochloe littoralis, Salicornica ssp., Spartina alterniflora,* and *Spartina patens*.

3. PERFORMANCE STANDARDS

3.1 Stabilization of Dredge Material

In a created intertidal habitat, appropriate use of structures, strategic placement of dredge discharge pipes, and post-consolidation contouring can lead to the desired landscape-level geomorphology.

Performance standards that will meet planting criteria shall be based on an edge-to-area ratio equal to or greater than median edge-to-area ratios of natural marsh sites. Another performance standard shall be for open-water habitat with connection to tidal flushing to be equal to or greater than median areas of open-water habitat with connection to tidal flushing in natural marsh sites. Both of these performance standards require consideration of landscape-level morphology of natural marshes in the project area. Landscape-level geomorphology can be determined from aerial photographs and will not include consideration of elevation and slopes. High-resolution, large-scale aerial photographs, such as Digital Orthophoto Quarter Quadrangles (DOQQ), are required to better understand landscape-level morphology of sites.

3.2 Vegetation

A ground-truthed GIS evaluation of DOQQs or similar photography shall be performed to determine vegetative cover. The total vegetative cover shall be 80 percent tall form *Spartina alterniflora*. No more than 20 percent of the total vegetative cover, inclusive of the bare ground, shall be high marsh species.

3.3 Wildlife

The BUS sites shall establish an intertidal habitat that supports wildlife ranging from local fish to local birds.

Wildlife use will be assessed through observation and recording of species use and diversity over time.

4. MONITORING PLAN

Because the intertidal habitat creation will occur over 50 years, a detailed monitoring plan, such as the one presented Table 21, is needed to ensure continuity. Intertidal habitat monitoring schemes evolve over time and, although each step in the evolution of a monitoring plan may seem reasonable, the overall effect is to render data collected in the early days of a project incomparable to data collected in later efforts. While the methods presented in this report should not be seen as sacrosanct, any changes to these methods should be carefully considered.

4.1 Monitoring Schedule

Table 21 demonstrates the task description and scheduling for the BUS monitoring plan.

Table 21 - Monitoring Schedule

Performance Standard	Monitoring Method				
Annually					
Structural integrity of levees	Assess the structural integrity of levees and other structures required for stability				
No undesirable plant species	Site visits with local resource agency personnel				
Post-Dree	dge Cycle				
No visible signs of dredge fans outside of BUS	On-site inspections of intertidal habitat area during MLLW to observe for presence of dredge fans				
5 Years Pos	st-Planting				
Water temperature, dissolved oxygen content, and salinity shall be within 10% of reference marsh	Utility continuous measuring devices for 7 consecutive days within the intertidal habitat and the reference marsh				
Volume of water exchange shall be within at least	Deploy flow meters at 500 feet from main tidal inlet				
70% of that observed within reference marsh	in both the intertidal habitat and reference marsh				
Depth of tidal inlets, ponds, and creeks shall be at	Survey water depths at 100 ft, 1,000 ft, and 1,500 ft				
least 80% of average depth of reference marsh	from main tidal inlet and measure pond and creek				
similar items					
	very 5 Years to a Maximum of 20 Years				
Maximum loss of 30% of initially constructed	DOQQs or similar photography to establish				
habitat	changes in intertidal habitat as compared to				
	reference marshes				
80% of total vegetative cover shall be tall form	DOQQs or similar photography				
Spartina alterniflora No more than 20% of total vegetative cover,					
inclusive of bare ground, shall be high marsh					
species, such as Batis maritima, Borrichia	DOQQs or similar photography				
frutescens, Monoanthochloe littoralis, Salicornia	Dodds or similar briotography				
ssp., and Lycium carolinanum					
At least 40% marsh edge to area ratio by year 5 as compared with reference marsh. With an additional 20% each subsequent 5 year cycle	DOQQs or similar photography				
Open water habitat with connection to tidal flushing is at least 40% of that compared with reference marsh. With an additional 20% each subsequent 5 year cycle	DOQQs or similar photography				
At least 40% of the isolated pond area as compared with reference marsh. With an additional 20% each subsequent 5 year cycle	DOQQs or similar photography				
Mean overall density of transient and resident fish	77.1				
are not significantly different than reference marsh	Fisheries censusing via trapping				
Mean overall density and diversity of birds shall be at least 60^ of that of reference marsh	Traverse main tidal creek a distance of 2000 ft along both the intertidal habitat and reference marsh and identify birds observed foraging and roosting				
Special roosting					
Elevations within the intertidal habitat shall be at Sample in-situ dredged material when intertidal					
least 90% of the projected elevations with the appropriate bulking and consolidation factors applied	habitat is at approximately 50% capacity and laboratory test material for predicted bulking and consolidation factors				
**					

5. REMEDIAL ACTIONS

If the BUS do not meet the criteria established in this DMMP then remedial action shall be required in order to establish a successful intertidal habitat.



Texas City Channel
Texas City Channel

Contract Number	Start/ Finish	Contractor/ Dredge	Work Type	Section Number		Up Stream Station	Prescribed Yardage	Over-Depth Yardage	Total Cu Yds	Cost Per cy Contract Cost
CA007	23-Jul-80 17-Jun-82	T.L. James & Company, Inc. (Area George D. Williams Capt. Clark	New Work Dredging							
		Bill James			•	•				
Texas	City Channel - B	asin, Turning		. 1	4+253	2+259.54	174,537	38,260	212 202	## 400
		-		2	2+259.54	0+000	247,768	56,342	212,797 304,110	\$2.450
Texas	: City Channel - In	dustrial Canal	4	3	111+44.09	81+00	94,735	26,945	121,680	\$2.450 \$2.450
			•	4	81+00	62+00	85,220	17,628	102,848	\$2.450 \$2.450
	-		•	5	62+00	42+00	67,907	20,404	88,311	\$2.450 \$2.450
	٠			6	42+00	23+00	77,301	30,609	107,910	\$2,450 \$2,450
	City Channel - In			7	23+00	11+36	101,080	20,318	121,398	\$2,450 \$2,450
Texas	City Channel - Ba	asin, Turning		8A	3+996	3+000	350,050	9,678	359,728	\$1.300
	4			8B	3+000	2+259	357,733	7,822	365,555	\$1.300
		· · · · · · · · · · · · · · · · · · ·	•	9A	2+259	1+000	566,188	13,289	579,477	\$1.300
•				9B	1+000	0+000	498,611	10,556	509,167	\$1.300
Texas	City Channel - In-	dustrial Canal		10	113+15	91+00	616,070	34,279	650,349	\$1.500
				11	91+00	81+00	196,341	11,654	207,995	\$1.500
				12	81+00	62+00	279,740	16,482	296,222	\$1.500
			a.	13	62+00	42+00	240,719	16,667	257,386	\$1.500
				14	42+00	23+00	289,441	17,074	306,515	\$1,500
•	City Channel - In		•	15	23+00	11+36	368,011	41,545	409,556	\$1.500
	•	ischarge Canal Ext.		16	0+00	24+00	41,705	3,374	45,079	\$2,320
Texas	City Channel - Ba	asin, Turning		17	3+758	2+259.54	265,847	56,369	322,216	\$1,300
			•	18	2+259.54	0+000	384,213	79,987	464,200	\$1.300
Texas	City Channel - In	dustrial Canal		19	113+15	106+75	61,489	11,713	73,202	\$1.500
						Totals:	5,364,706	540,995	5,905,701	\$11,581,247.51
DACW6481C0040 CA007	02-Sep-81 01-Dec-81	T.L. James & Company, Inc. (Area Bill James	Maintenance Dredging							
•	City Channel	an same		4	31.000	0.0.0.0				
icxas	with Catalians			1	31+000	25+000	384,186	128,439	512,625	\$0.770
					25+000	21+000	317,789	117,444	435,233	\$0.770
				3	21+000	16+000	297,934	115,645	413,579	\$0.770
•	* *		•	. 4	16+000	H1+000	310,648	129,032	439,680	\$0.770
				5	11+000	6+000	326,858	108,845	435,703	\$0.770
				6	6+000	1+520	253,924	112,636	366,560	\$0,770
						Totals:	1,891,339	712,041	2,603,380	\$2,304,602.60

Texas City Channel
Texas City Channel

Contract Number	Start/ Finish	Contractor/ Dredge	Work Type	Section Number	DownStream Station	Up Stream Station	Prescribed Yardage	Over-Depth Yardage	Total Cu Yds	Cost Per cy Contract Cost
DACW6482C0015 CAC00	23-Feb-82 08-May-82	King Fisher Marine Service, Inc. Everett Fisher	Maintenance Dredging							
GIWV	V - Port Bolívar to	Galveston Causeway		- 1	3284+00	3323+00	82,258	39,416	121,674	
				2	3323+00	3370+00	69,155	54,835	123,990	
		•		3	3370+00	3420+00	86,682	39,043	125,725	
		:	•	4	3420+00	3470±00	76,616	45,130	121,746	
				5	3470+00	3520+00	100,476	40,708	141,184	
•				6	3520+00	3578+00	92,845	26,759	119,604	
	City Channel			7	46+00	5+00	107,035	32,705	139,740	
GIWV	V - Port Bolivar to	Galveston Causeway - Alternate Route		8	-7+000	-2+000	76,742	37,697	114,439	
	•			9	-2+000	3+000	101,148	37,293	138,441	
			•	10	3+000	8+000	149,522	50,770	200,292	
				11	8+000	13+000	40,132	39,717	79,849	
				• • .		Totals:	982,611	444,073	1,426,684	\$848,242.91
ACW6484C0027 CA007	21-Aug-84 08-Apr-85	Williams-McWilliams Company Paul F. Jahncke	Maintenance Dredging							
Texas	Cîty Channel			1	34+000	25+000	544,744	159,357	704,101	\$0.416
	•			2	25+000	20+000	444,997	135,881	580,878	\$0.416
				. 3	20+000	15+000	344,922	117,903	462,825	\$0.416
				4/0)) 15+000	10+000	320,854	88,629	409,483	\$0.416
				5	10+000	5+000	295,007	133,865	428,872	\$0,416
				6	5+000	1+520	173,904	80,586	254,490	\$0.416
19		·		%)		Totals:	2,124,428	716,221	2,840,649	\$1,662,172.98

Texas City Channel
Texas City Channel

Contract Number	Start/ Finish	Contractor/ Dredge	Work Type	Section Number	DownStream Station	Up Stream Station	Prescribed Yardage	Over-Depth Yardage	Total Cu Yds	Cost Per cy Contract Cost
DACW6486C0024	19-Aug-86	North American Dredge Company,	Maintenance Dredging							
CAC00	25-Dec-86	Conway								
GIWW	- Port Bolivar to	Galveston Causeway		1	3284+00	3323+00	73,967	34,838	108,805	
		·		2	3323+00	3370+00	36,872	54,003	90,875	
1		•		3	3370+00	3420+00	75,121	37,548	112,669	
			•	4	3420+00	3470+00	57,844	41,468	99,312	
				5	3470+00	3520+00	79,989	35,454	115,443	
				6	3520+00	3578+00	55,162	40,102	95,264	
	City Channel			7	46+00	5+00	106,585	32,844	139,429	
GIWW	 Port Bolivar to 	Galveston Causeway - Alternate Route		8	-6+800	-2+000	67,570	41,995	109,565	
	•	·		9	-2+000	3+000	112,379	44,797	157,176	
				10	3+000	8+000	142,815	51,623	194,438	
				11	8+000	10+818.2	15,671	28,508	44,179	
			<i>.</i> •			Totals:	823,975	443,180	1,267,155	\$985,239.10
OACW6487C0014 CA007	03-Apr-87 06-May-87	Bean Dredging Corporation Dave Blackburn	Maintenance Dredging							
Texas C	City Channel	and the second second	and a second second	. 1	31+400	25+000	284,192	107,174	391,366	\$0.440
				2	25+000	20+000	212,035	103,167	315,202	\$0.440
*24				3	20+000	14+400	158,002	83,697	241,699	\$0.440
						Totals:	654,229	294,038	948,267	\$467,237.38
DACW6487C0034 CA007	13-Sep-87 15-Mar-88	Tom James Company, inc. (Area	Maintenance Dredging							
Texas C	City Channel			1	14+400	10+000	189,466	72,224	261,690	\$0,550
				2	10+000	5+000	77,044	78,476	155,520	\$0.550
				3	5+000	1+493	46,936	45,770	92,706	\$0.550
Texas C	City Channel - Ba	isin, Turning		4	4+253	2+000	85,121	19,848	104,969	\$1.010
				5	2+000	0+000	63,472	16,742	80,214	\$1.010
Texas C	City Channel - Inc	i. Canal & T.B.		6	113+16.58	60+00	166,284	44,164	210,448	\$1,250
	e.			7	60+00	12+36.5	118,121	47,363	165,484	\$1.250
						Totals:	746,444	324,587	1,071,031	\$1,565,757.63

Texas City Channel
Texas City Channel

Contract Number	Start/ Finish	Contractor/ Dredge	Work Type	Section Number	DownStream Station	Up Stream Station	Prescribed Yardage	Over-Depth Yardage	Total Cu Yds	Cost Per cy Contract Cost
DACW6490C0008 CA007	11-Dec-89 07-Mar-90	Mike Hooks, Inc. Missouri H.	Maintenance Dredging							
Texa	s City Channel			1 2 3 4 5	36+000 30+000 25+000 20+000 15+000	30+000 25+000 20+000 15+000 8+000	12,128 288,145 278,747 178,297 158,430	14,402 99,737 68,078 81,649 150,482	26,530 387,882 346,825 259,946 308,912	\$0.550 \$0.550 \$0.550 \$0.550 \$0.550
	•					Totals:	915,747	414,348	1,330,095	\$786,552.25
DACW6491C0046 CA007	07-Sep-91 07-Jan-92	King Fisher Marine Service, Inc. Everett Fisher J.N. Fisher Shamrock	Maintenance Dredging	·			·			
GIW	W - Port Bolivar to	Galveston Causeway		1 .	328+400	332+300		-		
				2	332+300	337+000				
				3	337+000	342+000	•			
				4	342+000	347+000		. "		
				5	347±000	352+000				
77	- 01- 01 1			6	352+000	357+800	•			
••	s City Channel	Column Communication of the Column Communication of the Column Co		7	46+00	5+00				
GIW	w - ron bonvar to	Galveston Causeway - Alternate Route	:	8	-7+00	-2+00	•	* -		
				9 10	-2+00 3+000	3+000				
				11		8+000 10+818.23	1,312,550	0	1,312,550	\$0.600
			•			Totals:	1,312,550	. 0	1,312,550	\$965,856.70

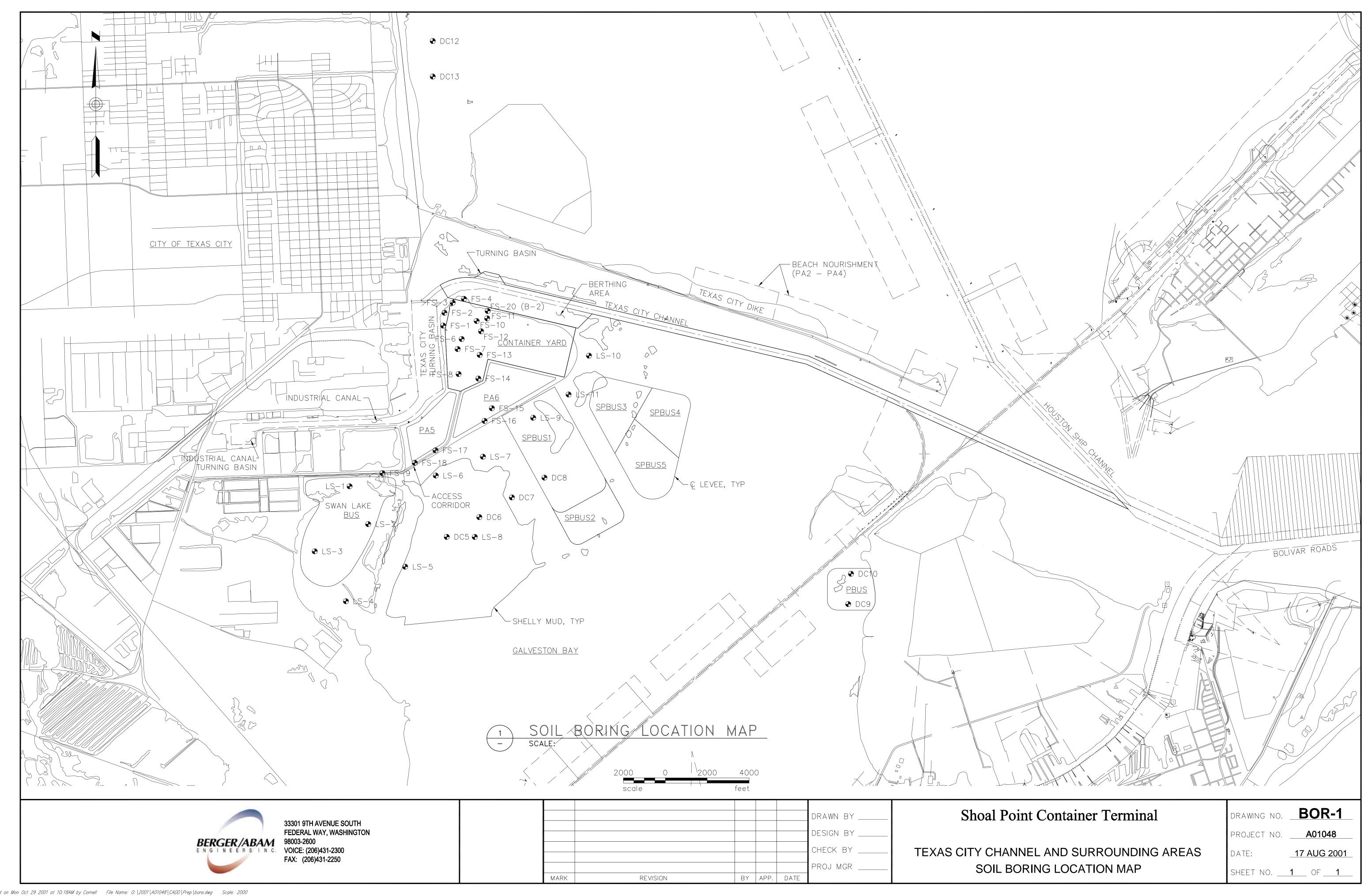
Texas City Channel
Texas City Channel

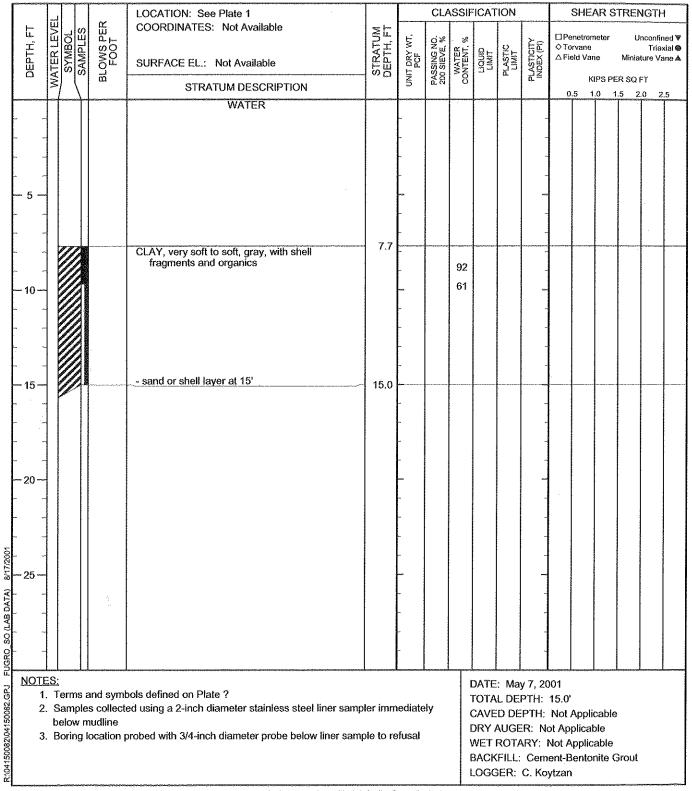
Contract Number	Start/ Finish	Contractor/ Dredge	Wark Type	Section Number	DownStream Station	Up Stream Station	Prescribed Yardage	Over-Depth Yardage	Total Cu Yds	Cost Per cy Contract Cost
ACW6492C0053 CA007	25-Sep-92 18-Dec-92	Bean Dredging Corporation Dave Blackburn	Maintenance Dredging							
Texa	s City Channel	. A			36+000	. 30+000	1,825,993	0	1,825,993	\$0.480
*.		•		2	30+000	25+000	.,,,,,,	• .	1,523,773	\$0.480 \$0.480
		•		3	25+000	20+000		-		\$0.480
				4	20+000	15+000			2.5	\$0.480
		•		.5	15+000	10+000				\$0.480
				6	10+000	5+000				\$0.480
				7	5+000	1+493			į.	\$0.480
Texas	s City Channel - Ba	sin, Turning		8	4+253	2+000				\$0.480
				9 -	2+000	0+000				\$0.480
	s City Channel - Inc			10	113+16.58	60+00				\$0.480
Texas	s City Channel - Inc	i. Canal & T.B.		1 9	60+00	12+36.5				\$0.480
						Totals:	1,825,993	0	1,825,993	\$1,545,410.73
ACW6496C0004 CA007	07-Dec-95 18-Mar-96	Mike Hooks, Inc. Missouri H.	Maintenance Dredging	•			•		•	
Texas	s City Channel			1	32+000	25+000	. 200 541			
	,			2	25÷000	20+500	308,741	117,414	426,155	\$0.680
7				3	20+500	20+300 15+000	325,885	96,875	422,760	\$0.680
				s s	15+000	10+000	202,694	122,639	325,333	\$0.680
				5	10÷000	5+000	134,433	124,779	259,212	\$0.680
				s K	5+000	1+493	52,931	82,121	135,052	\$0.680
Теха	s City Channel - Ba	sin. Turning	•	7	4+253	2+000	57,471 67,785	51,361	108,832	\$0.680
	,			8	2+000	2+000 0+000	86,747	46,523	114,308	\$0.680
				ū	2.000	V-1000	80,747	44,384	131,131	\$0.680
		the state of the s				Totals:	1,236,687	686,096	1,922,783	\$1,467,492.44

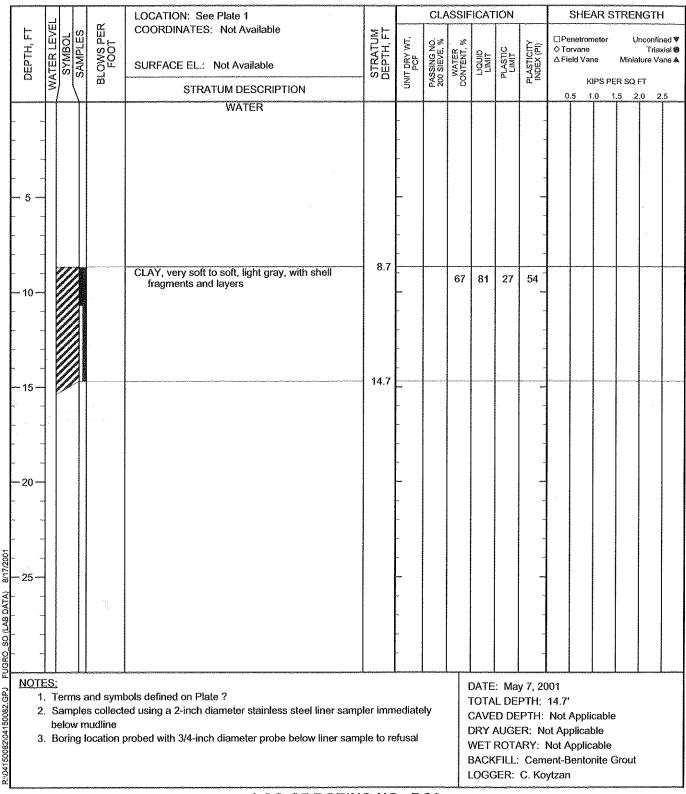
Texas City Channel
Texas City Channel

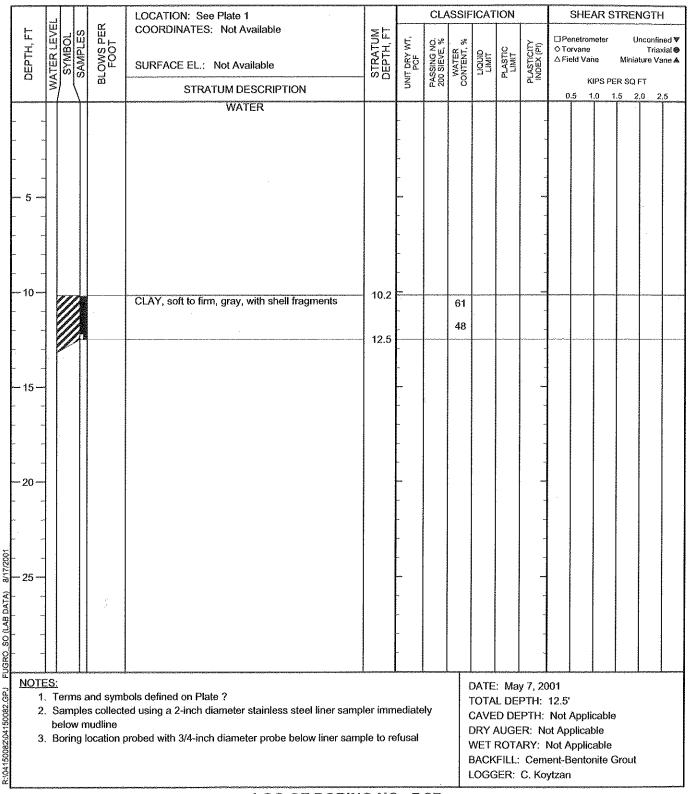
Contract Number	Start/ Finish	Contractor/ Dredge	Work Type	Section Number	DownStream Station	Up Stream Station	Prescribed Yardage	Over-Depth Yardage	Total Cu Yds	Cost Per cy Contract Cos
ACW6496C0019	26-May-96	T.L. James & Company, Inc. (Area	Maintenance Dredging		-					
CAC01	31-Oct-96	J.N. Fisher Tom James		•						
GIWW	V - High Island to	Port Bolivar		1	3172+00	3207+00	119,546	33,677	153,223	\$1.850
				1A	3172+00	3207+00	68,218	67,423	135,641	\$1.850
GIWW	√ - Port Bolivar to	Galveston Causeway		2	3224+00	3244+00	95,060	90,679	185,739	\$1.850
				3.	3264+00	3323+00	42,115	38,135	80,250	\$0.870
			•	4	3323+00	3370+00	17,313	55,012	72,325	\$0.870
				5	3370+00	3420+00	70,336	42,728	113,064	\$0.870
				6	3420+00	3470+00	65,231	44,309	109,540	\$0.870
				7	3470+00	3520+00	71,618	42,625	114,243	\$0.870
				8	3520+00	3578+00	35,830	45,667	81,497	\$0.870
Texas	City Channel - Ju	nction	-	9	5+00	46+00	91,625	28,424	120,049	\$0.870
GIWW	/ - Port Bolivar to	Galveston Causeway - Alternate Route	in the state of th	10	-7+000	-2+000	125,100	38,020	163,120	\$0.870
			· · · · · · · · · · · · · · · · · · ·	11	-2+000	3+000	171,402	43,826	215,228	\$0.870
				12	3+000	8+000	153,665	36,907	190,572	\$0.870
				13		10+820.18	19,178	31,558	50,736	\$0.870
				ju kapit		Totals:	1,146,237	638,990	1,785,227	\$2,066,701.65
.C.W6498C0027 √	31-Oct-98	Works Marine Inc (Duridain Die	Notation of the same							
CA007	11-Apr-99	Weeks Marine, Inc. (Dredging Div	Maintenance Dredging		•			. 4		
	•									
1 exas	City Channel			1	32+000	25+000	. į			\$1.250
				. 2	25+000	20+500	:			\$1.250
19			* .	3	20+500	15+000				\$1.250
		2		4	15+000	10+000				\$1.250
		•		5	10+000	5+000				\$1.250
	a. a			,6	5+000	1+493				\$1.250
lexas	City Channel - Ba	asın, Turning		7	4+253	2+000			e e e e e e e e e e e e e e e e e e e	\$1.250
				8	2+000	0+000				\$1,250
	City Channel - In	dustrial Canal		9	110+99.02	60+00				\$1.250
Texas				10	60100	70126 40	0.000.00Z			
Texas				10	60+00	12+36.42	2,077,276	0	2,077,276	\$1.250

Appendix B – Geotechnical Information





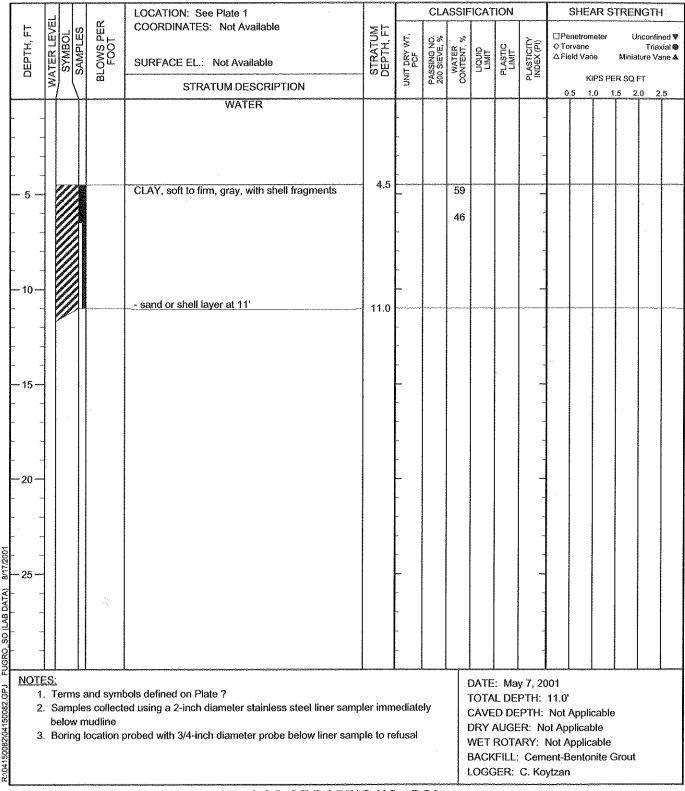


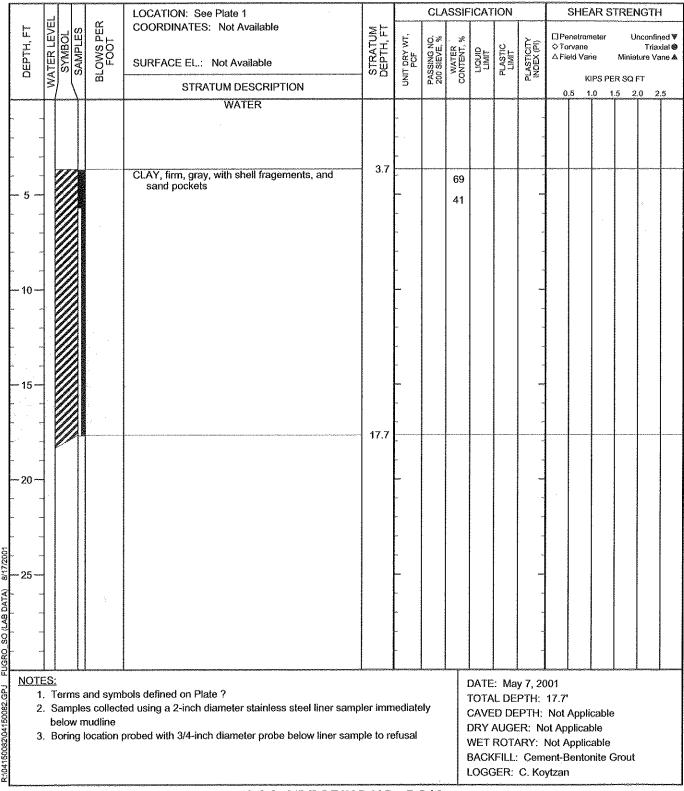


LOG OF BORING NO. DC7
TEXAS CITY INTERNATIONAL TERMINALS
PHASE 1 IMPROVEMENTS
TEXAS CITY, TEXAS

graden et den en en en en	L	Π	Ī	~	LOCATION: See Plate 1			CL/	SSIF	ICAT	ION	***********		SHE/	NR S	TREN	GTH	l.
DEPTH, FT	ATER LEVE	SYMBOL	SAMPLES	BLOWS PER FOOT	COORDINATES: Not Available SURFACE EL.: Not Available	STRATUM DEPTH, FT	UNIT DRY WT, PCF	PASSING NO. 200 SIEVE, %	WATER CONTENT, %	LINIT	PLASTIC LIMIT	PLASTICITY INDEX (PI)	¢Τα	netrom rvane ald Van	e	Un Miniati R SQ F		dal 🧇
	3	\			STRATUM DESCRIPTION		5	0.70	Q				0			.5 2.0		.5
5					WATER		~					- - -						
- 10		# W #				- 10.5	-		- War			-						
- ,					CLAY, soft to firm, gray, with organics in upper 4"	13.5	-		73 42	69	23	46 -						
15			***************************************				4 4										***************************************	
-20-											TTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTT							
30 SO (LAB DATA) 8/17/2001			VIII. 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	TO STATE OF THE ST							W/Walliam III III II	was	1000					
1150082.	I. T 2. S be	amp elow	les m	collecte udline	pols defined on Plate ? ed using a 2-inch diameter stainless steel liner samp probed with 3/4-inch diameter probe below liner sam	ple to re	fusal		1 1 V	TOTA CAVE ORY A WET I BACK	L DEI D DE AUGE ROTA FILL:	/ 7, 20 PTH: PTH: R: No RY: I Cem C. Ko	13.5' Not a ot App Not A ent-B	olicat pplica entor	le able			

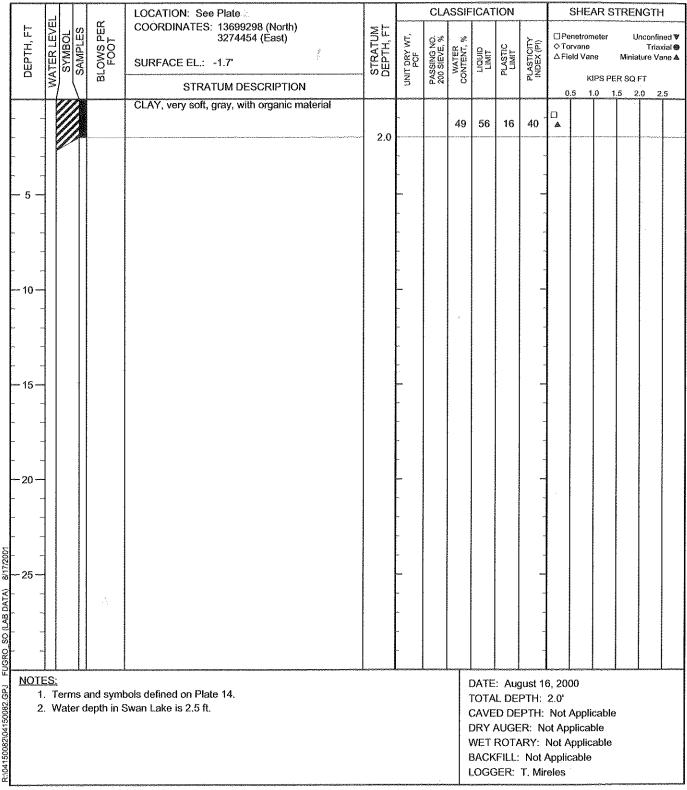
LOG OF BORING NO. DC8
TEXAS CITY INTERNATIONAL TERMINALS
PHASE 1 IMPROVEMENTS
TEXAS CITY, TEXAS





***************************************				~	LOCATION: See Plate 1			CLA	SSIF	ICAT	ION	PM. * . * . P *		SHE	AR S	TREN	IGTH	1
DEPTH, FT	WATER LEVE	SYMBOL	SAMPLES	BLOWS PER FOOT	COORDINATES: Not Available SURFACE EL.: Not Available STRATUM DESCRIPTION	STRATUM DEPTH, FT	UNIT DRY WT. PCF	PASSING NO. 200 SIEVE, %	WATER CONTENT, %	LIQUID	PLASTIC LIMIT	PLASTICITY INDEX (PI)	♦To	enetron ervane eld Var K	10		ture Va	xial 🚳
*****	4		\dashv		WATER	- NATIONAL PROPERTY OF THE PERSON NATIONAL PROPERTY OF THE PER							0	.5 1	.0 1	.5 2	0 2	.5
					SAND, fine with trace silt and shell fragments	3.0 3.3						_					**************************************	
- 5							-		:								·	
- 10 -	***************************************						~ 			-		-						
	***************************************		***************************************							-								
- 20 -	***************************************		***************************************				3											
ATA) 8/17/2004				a,			1					1 1 1						
FUGRO SO (LAB DATA	9				magazini kata jang jang saga saga saga saga saga saga saga s			ensyys - emoye		.		77 44	204					
1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	. T . S b	erm amp elow	les m	collect udline	bols defined on Plate ? ed using a 2-inch diameter stainless steel liner samp probed with 3/4-inch diameter probe below liner sam			ely		TOTA CAVE ORY / WET I BACK	L DEI D DE AUGE ROTA FILL:	y 7, 20 PTH: PTH: R: No ARY: Cem C. Ko	3.3' Not ot Ap Not A ent-E	plical Applic Bento	ble able			
er L	************	e-donocente	*******	***************************************	LOG OF BORING	> 81A	n.	340				**********		***************************************				

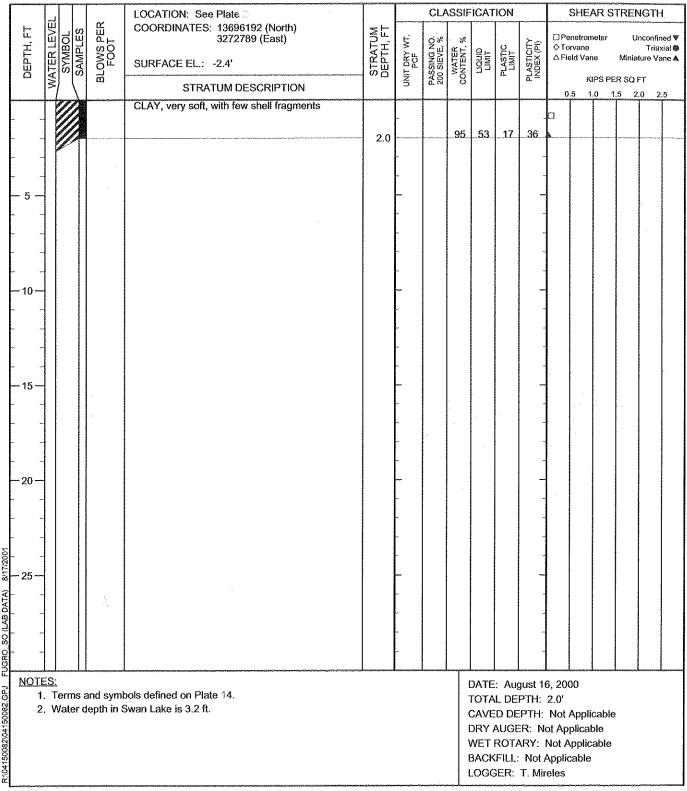
Parity and an angelon of the second			T	·············	LOCATION: See Plate 1			CLA	SSIF	ICAT	ION			SHE	AR S	TREN	IGTH	
DEPTH, FT	WATER LEVE	SYMBOL	SAMPLES	BLOWS PER FOOT	COORDINATES: Not Available SURFACE EL.: Not Available	STRATUM DEPTH, FT	UNIT DRY WT, PCF	PASSING NO. 200 SIEVE, %	WATER CONTENT, %	LIMIT	PLASTIC LIMIT	PLASTICITY INDEX (P1)	♦Te	netron rvane eld Var	ie .		ure Va	dal 😂
	15	/ \	١		STRATUM DESCRIPTION		٥	G. IN	Ü				0			.5 2		.5
M-6-AMAGAMMATAN		dunumys	$\dagger \dagger$,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	WATER						************		M20-027082		T	Spiriture Services		
-	J			erro a serro substituti e de servicio	SILTY SAND, with shell fragments and clay	4.5					ė.	-	and de sistem a					Specific and the specific spec
- 5 - - -	-				seams	5.5	-					-						
- 10 -	- J						- - -	***************************************				~						
- 15 - - -												, , , , , , , , , , , , , , , , , , , ,						
-20-	7 7						-					, , , , , , , , , , , , , , , , , , ,				West, with the second s		
FUGRO SO (LAB DATA) 8/17/2001				*						THE CONTRACT OF THE CONTRACT O	***************************************							
H50082.GPJ	1. T 2. S b	erm amı elov	oles / mi	collect udline	bols defined on Plate ? ed using a 2-inch diameter stainless steel liner samp probed with 3/4-inch diameter probe below liner sam	ple to re	fusal	, , , , , , , , , , , , , , , , , , , 	[] [] [] [] [] [] [] [] [] []	CAVE DRY / WET I BACK	L DEI D DE AUGE ROTA FILL:	y 7, 20 PTH: PTH: :R: No ARY: I Cem C. Ko	5.5' Not a ot Ap Not A ent-E	plical oplic lento	ole able			

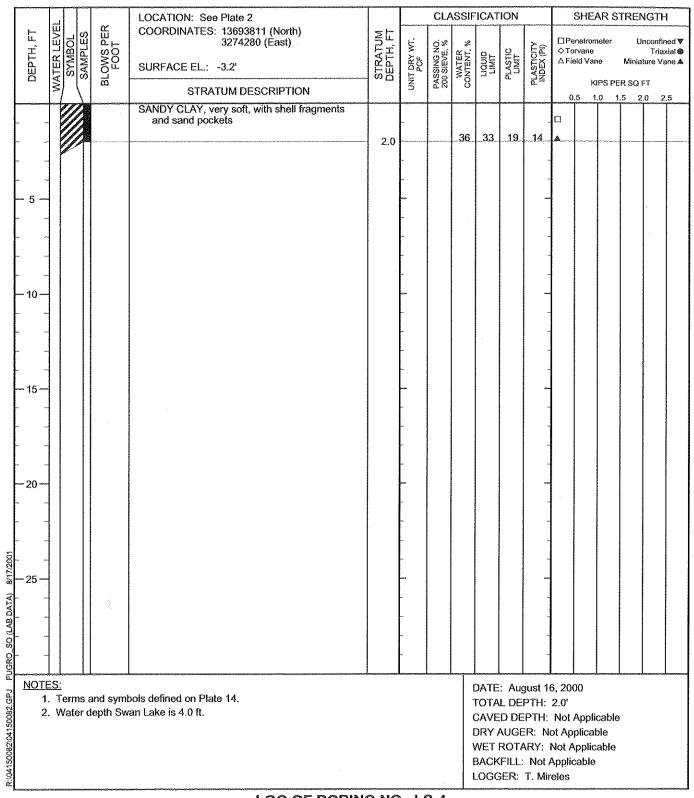


LOG OF BORING NO. LS-1
TEXAS CITY INTERNATIONAL TERMINALS
PHASE 1 IMPROVEMENTS
TEXAS CITY, TEXAS

nagyun ikun kinandeun	5-1			~	LOCATION: See Plate 2	**************************************	***************************************	CLA	SSIF	ICAT	ION			SHE	AR S	TREN	GTH	
DEPTH, FT	ATER LEVE	SYMBOL	CAINITLES	BLOWS PER FOOT	COORDINATES: 13697492 (North) 3275343 (East) SURFACE EL.: -2.5'	STRATUM DEPTH, FT	UNIT DRY WT, PCF	PASSING NO. 200 SIEVE, %	WATER CONTENT, %	LIMIT	PLASTIC LIMIT	PLASTICITY INDEX (PI)	ФTq	enetron ervane eld Var	ie	Miniatu		cial 😂
	M			മ	STRATUM DESCRIPTION		3	8.7	8			α	0			R SQ F		.5
					CLAY, very soft, with few shell fragments	2.0			. 67	76	22	_54_		-				
5	-						- - - - -							***************************************				
. 10												-						
- 15							- - -						·					
- 20 - - 20 - 												-	`					
25				\$ *			2000 					, , ,		The same of the sa				
<u>NO11</u>	. Т				ools defined on Plate 14. Swan Lake is 3.3 ft.			, and a second second	1	TOTA CAVE DRY A WET BACK	L DE D DE AUGE ROT/ (FILL:	gust 16 PTH: EPTH: ER: No ARY: Not / T. Mir	2.0' Not ot Ap Not A Appli	Appli plical	ble able			

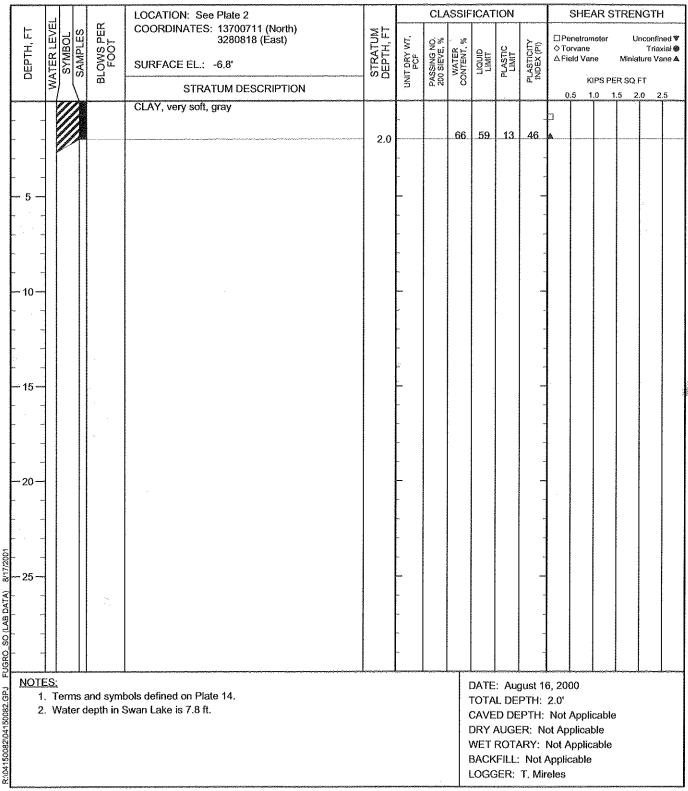
LOG OF BORING NO. LS-2
TEXAS CITY INTERNATIONAL TERMINALS
PHASE 1 IMPROVEMENTS
TEXAS CITY, TEXAS



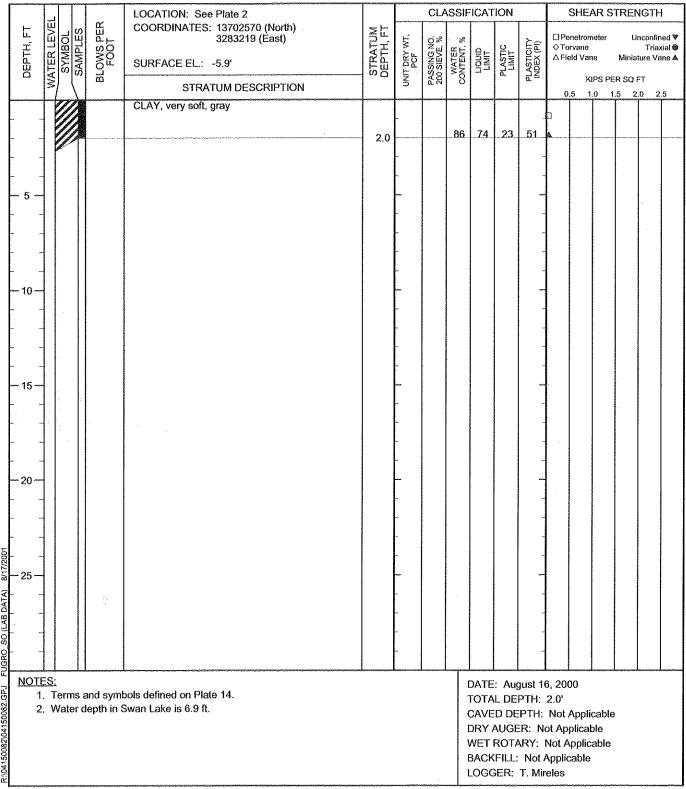


***************************************			Ī	~	LOCATION: See Plate 2			CL/	ASSIF	ICAT	ION	· · · · · · · · · · · · · · · · · · ·		SHE	AR S	TRE	NGTI	+
DEPTH, FT	WATER LEVE	SYMBOL	SAMPLES	BLOWS PER FOOT	COORDINATES: 13695458 (North) 3277108 (East) SURFACE EL.: -4.8'	STRATUM DEPTH, FT	UNIT DRY WT, PCF	PASSING NO. 200 SIEVE, %	WATER CONTENT, %	LIMIT	PLASTIC LIMIT	PLASTICITY INDEX (PI)	♦Ta	enetron orvane eld Var	ne		iture V	xial 🛭
	3	'\	. [STRATUM DESCRIPTION		5	O' LA	"			~	0			.5 2		2.5
And the state of t					HARD SURFACE OVER SAND, with shell fragments and clay	2.0						~						
5 5							-					-			***************************************			
10 												- -						
 - 15												- oue						
- 20 -							(-	-	TO A CALL AND A CALL A		**************************************		
25 —			***************************************				-										Territory very very manifoly was a part of the same of	T T T T T T T T T T T T T T T T T T T
		×					-											
	. Т				ools defined on Plate 14. an Lake is 5.7 ft.				() 1	TOTA CAVE ORY / WET I BACK	L DEI D DE AUGE ROTA FILL:	gust 16 PTH: PTH: PTH: RR: No Not A T, Mir	2.0' Not a of Ap Not A Applic	Appli plical	ble :able	÷		

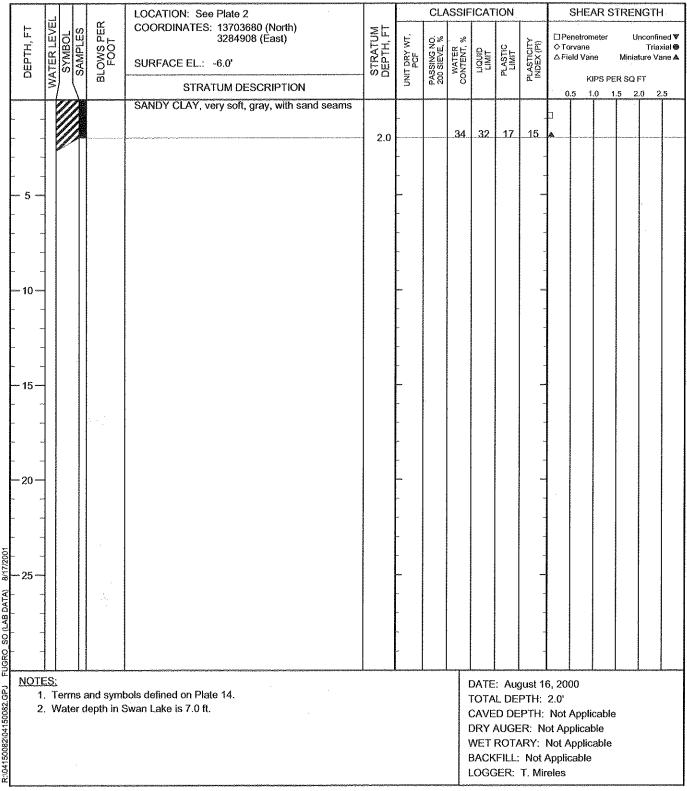
Γ	omide9al/mine				~	LOCATION: See Plate 2			CL/	SSIF	ICAT	ION	·····		SHE	AR S	TREN	IGTH	
	DEPTH, FT	WATER LEVE	SYMBOL	O'HINITED O	BLOWS PER FOOT	COORDINATES: 13699810 (North) 3278568 (East) SURFACE EL.: -5.5'	STRATUM DEPTH, FT	UNIT DRY WT, PCF	PASSING NO. 200 SIEVE, %	WATER CONTENT, %	LIQUID	PLASTIC LIMIT	PLASTICITY INDEX (PI)	♦Тα	enetron ervane eld Var	nė :	Miniat		dal 🍪
	L	À			ã	STRATUM DESCRIPTION		3	20.79	8			ಹ್≋	0			R SQ F		.5
-	_					HARD SURFACE OVER SAND, with shell fragments and clay		-			**************************************		-						
-	-						2.0	-					~						
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8/17/2001	- 25							-											
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FUGRO SO (LAB DATA)	_				***************************************			-					-						
	NOTE 1			l on	d symb	pols defined on Plate 14.	<u> </u>						gust 1		 00	<u> </u>			
4150082.G						Swan Lake is 6.5 ft.					CAVE	D DE	PTH: PTH: R: No	Not.			ı		
R:104150082\04150082.GPJ										\	WET I	ROTA FILL:	Not A	Not A Applic	pplic	able			
ìκ	·····	***********	-000000 -1 949		*****	LOG OF BORIN	C NC	· 16	2 6						-	<i></i>			



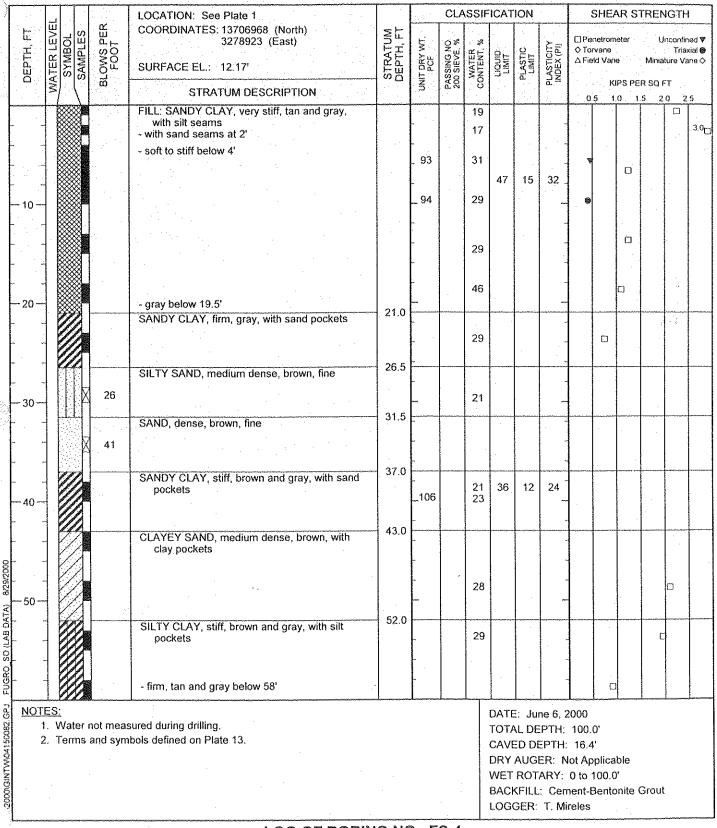
	 	Z SS		C .	LOCATION: See Plate 2		~~~~~	CL/	ASSIF	SSIFICATION				SHEAR STRENGTH					
DEPTH, FT	WATER LEVEL	SYMBOL	NAMI LEO	BLOWS PER FOOT	COORDINATES: 13696879 (North) 3280430 (East) SURFACE EL.: -8.6'	STRATUM DEPTH, FT	UNIT DRY WT, PCF	PASSING NO. 200 SIEVE, %	WATER CONTENT, %	LIQUID	PLASTIC LIMIT	PLASTICITY INDEX (PI)	□Penetrometer ♦Torvane △Field Vane			Minia	ned ♥ xial � ane &		
	×			m	STRATUM DESCRIPTION		3	P P P	8			Z=				ER SQ I		5	
					SANDY CLAY, very soft, with shell fragments	2.0													
- 5 -									TF OFFENDERS THE CONTRACTOR OF			- - - -							
10 1												- - -							
- 15	,		***************************************								-	-						27	
- 20								WASSEN, WASSEN				_				And the second s			
FUGRO SO (LAB DATA) 8/17/2001				ф. 3 -												***************************************			
I MOTE		orm	an	d cumb	vole defined on Plate 14							gust 1		00					
					ools defined on Plate 14. Swan Lake is 9.5 ft.				1	CAVE DRY / WET BACK	D DE AUGE ROT <i>A</i> FILL:	PTH: PTH: R: N ARY: Not A T. Mir	Not ot Ap Not A Applie	plical applic	ble able		innini iliaanaan ja	· income of the comment	



	L			****	LOCATION: See Plate 2			CL/	ASSIF	ICAT	ION.			SHE	AR S	TRE	VGTI	1
DEPTH, FT	WATER LEVE	SYMBOL	SAMPLES	BLOWS PER FOOT	COORDINATES: 13705534 (North) 3285882 (East) SURFACE EL.: -3.2'	STRATUM DEPTH, FT	UNIT DRY WT, PCF	PASSING NO. 200 SIEVE, %	WATER CONTENT, %	LIQUID	PLASTIC LIMIT	PLASTICITY INDEX (PI)	□Penetrometer ◇Torvane △Field Vane			Minia	ture V	xial 🚱
	*		Ü	മ	STRATUM DESCRIPTION		3					a.≕	KIPS PER S 0.5 1.0 1.5					
					SILTY SAND, very loose, gray, fine, with clay seams	2.0			33			-	A					
5	*						one a	WA-WA-WARANTA AND AND AND AND AND AND AND AND AND AN				-						
							· · · · · · · · · · · · · · · · · · ·		THE ATTENDATION OF THE PROPERTY OF THE PROPERT			- -						
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 - 20 -	, , , , , , , , , , , , , , , , , , , ,						-					 			THE TAXABLE PROPERTY OF TAXABLE PROPERTY O			
			***************************************													and the state of t	The state of the s	
				÷.			-				***************************************						WAR-11-11-11-11-11-11-11-11-11-11-11-11-11	A14-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-
<u>NOTE</u>	. Т				ools defined on Plate 14. Swan Lake is 4.2 ft.					TOTA CAVE DRY / WET I BACK	L DEI D DE AUGE ROTA FILL:	gust 10 PTH: PTH: PTH: R: No RY: Not A	2.0' Not ot Ap Not A Applie	Appli plica Applic	ble able		-	



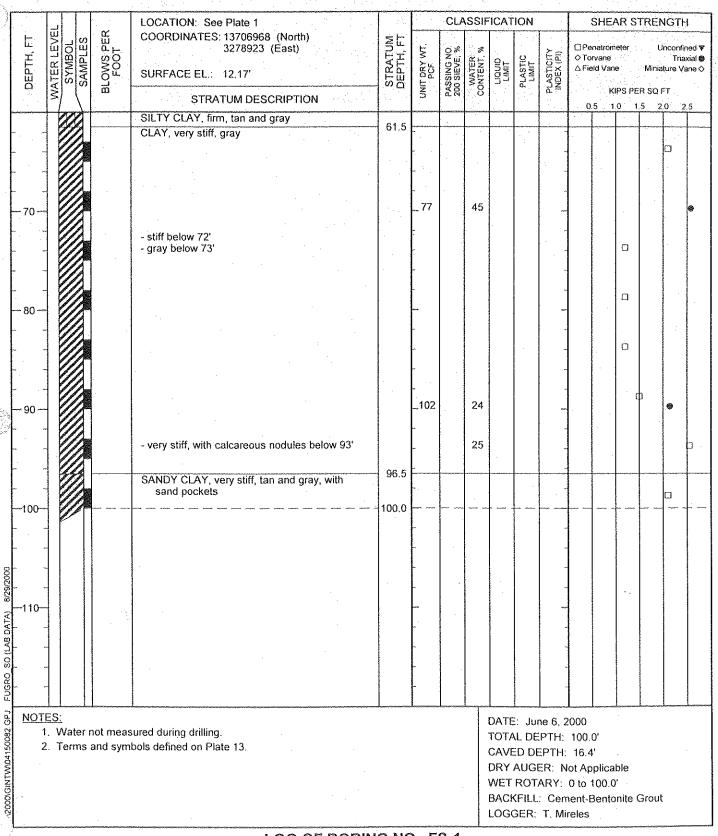




LOG OF BORING NO. FS-1
TEXAS CITY INTERNATIONAL TERMINALS
PHASE 1 IMPROVEMENTS
TEXAS CITY, TEXAS







LOG OF BORING NO. FS-1
TEXAS CITY INTERNATIONAL TERMINALS
PHASE 1 IMPROVEMENTS
TEXAS CITY, TEXAS



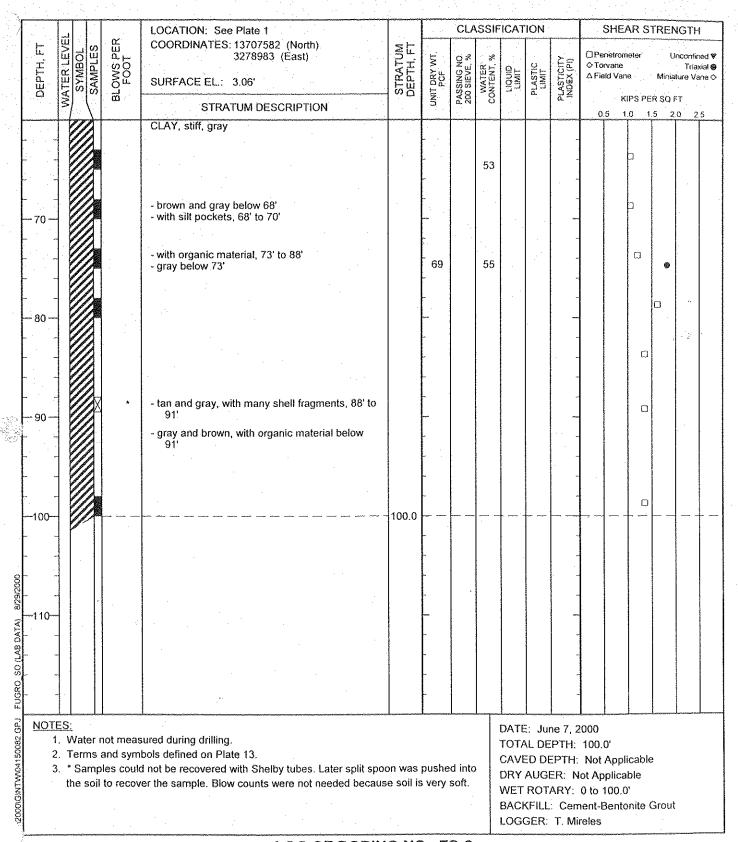


			<u> </u>	LOCATION: See Plate 1		<u> </u>	CLASSIFICATION SHEAR STRENGT										4
DEPTH, FT	WATER LEVE	SYMBOL	BLOWS PER FOOT	COORDINATES: 13707582 (North) 3278983 (East) SURFACE EL.: 3.06' STRATUM DESCRIPTION	STRATUM DEPTH, FT	UNIT DRY WT. PCF	PASSING NO 200 SIEVE, %	WATER CONTENT, %	LIQUID	PLASTIC	PLASTICITY INDEX (PI)	≎Tα ΔFie	4.00	e IPS PE		ture Va	xial 🏶 ane 🗘
				FILL: SILTY CLAY, stiff, tan and gray, with sand seams and pockets				18 30	19	16	3				0)	
	0000000		*	FILL: SILTY SAND, gray, fine, with clay seams and organic material	6.0		***************************************										
-10-	Yan in		16	SAND, medium dense, gray, fine	12.0	Print					-						
-				SANDY CLAY, soft, gray, with sand pockets	12.0	88		35 35	39	16	23 _						
_ 20			*	SILTY SAND, brown, fine	18.0											*1	
- · ·			38	SAND, dense, gray, fine	21.5	to .					-					. ;	
		111		CLAY, firm, brown and gray	27.5						-						
30 -			6			_					-						
	-			- very stiff, with calcareous nodules at 33'		107		21			-						4.
-40-	ļ			- stiff below 39'													
				SILTY CLAY, stiff, tan and gray	41.5			27			-	-					
- ·						-	-							o			
50 -				CLAY, stiff, gray	51.5						-						-
						78		43	Andreas de la constitución de la		-					8	
	1. V	Vater		isured during drilling. nbols defined on Plate 13.					TOTA	AL DE	ne 7, 2	100.					<u></u>
	3. *	Samı	oles cou	ld not be recovered with Shelby tubes. Later split spe ver the sample. Blow counts were not needed becau)	DRY WET	AUG ROT	EPTH: ER: N ARY: .: Cen	lot Ap 0 to	plica 100.0	ble '			

LOG OF BORING NO. FS-2
TEXAS CITY INTERNATIONAL TERMINALS
PHASE 1 IMPROVEMENTS
TEXAS CITY, TEXAS

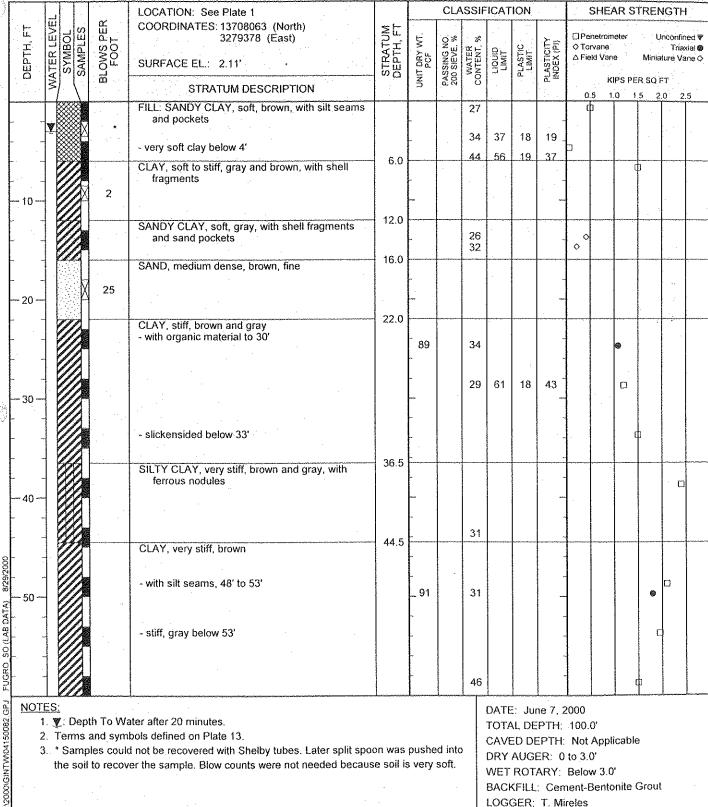
LOGGER: T. Mireles





LOG OF BORING NO. FS-2
TEXAS CITY INTERNATIONAL TERMINALS
PHASE 1 IMPROVEMENTS
TEXAS CITY, TEXAS





3. * Samples could not be recovered with Shelby tubes. Later split spoon was pushed into the soil to recover the sample. Blow counts were not needed because soil is very soft.

DRY AUGER: 0 to 3.0 WET ROTARY: Below 3.0'

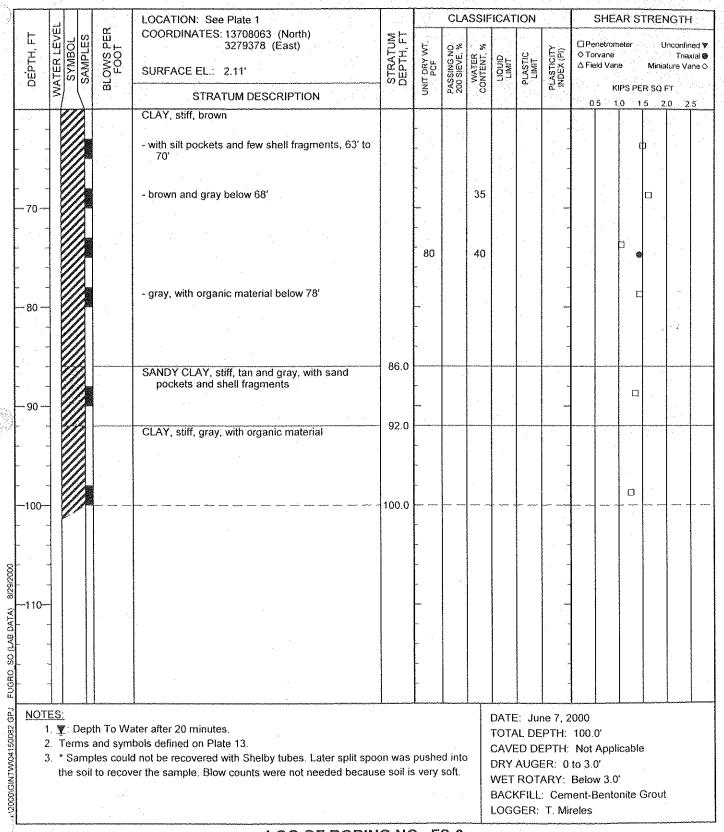
BACKFILL: Cement-Bentonite Grout

LOGGER: T. Mireles

LOG OF BORING NO. FS-3 TEXAS CITY INTERNATIONAL TERMINALS PHASE 1 IMPROVEMENTS TEXAS CITY, TEXAS







LOG OF BORING NO. FS-3
TEXAS CITY INTERNATIONAL TERMINALS
PHASE 1 IMPROVEMENTS
TEXAS CITY, TEXAS



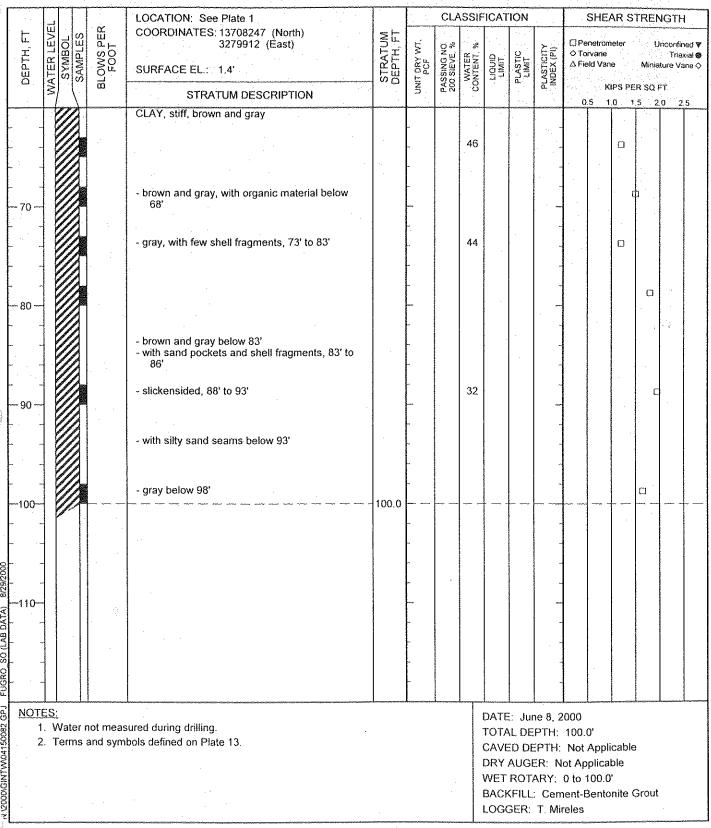


T				~	LOCATION: See Plate 1			CL/	ASSIF	ICAT	ION			SHE	AR ST	TREN	IGTH	
	DEPTH, FT	WATER LEVE	SAMPLES	BLOWS PER FOOT	COORDINATES: 13708247 (North) 3279912 (East) SURFACE EL.: 1.4' STRATUM DESCRIPTION	STRATUM DEPTH, FT	UNIT DRY WT.	PASSING NO. 200 SIEVE, %	WATER CONTENT, %	LIQUID	PLASTIC LIMIT	PLASTICITY INDEX (PI)	☐Penetrometer Unc. ◇ Torvane △ Field Vane Miniatur KIPS PER SQ FT					ciał 🚳
-						ļ	ļ		<u> </u>			*******	0	5 1	0 1	5 2	0 2.5	5
	~				FILL: CLAY, stiff, brown, with organic material and silt partings - soft, black and gray, with sand seams below 2' - very soft, gray, with sand seams below 4'				41 42 31	57 68	18 21	39 47	\$					
- - -	· - - 10 —			8	SAND, loose, gray, fine - with shell fragments to 8'	6.0						-						
Ŀ												_	ĺ			-		
					SANDY CLAY, soft, gray, with sand pockets	12.5			32			-	\$					
					SAND, medium dense, brown, fine	10.5	L							,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,				
	- 20		X	18		***************************************										<u>-</u>		
	-				CLAY, firm, brown and gray - with organic material to 25"	23.0				70	21	49		ם				
_	- 30 —				- stiff below 28'		- - -		27			-		:				
					- slickensided below 33'		94		31								***************************************	
				· · ·	SILTY CLAY, stiff, brown and gray, with ferrous nodules	36.5	-					-			D .			
	~ 40 ~~ -				with all analysts below 42!		-		20									
2000					- with silt pockets below 43' CLAY, stiff, brown and gray with silt pockets	47.0	-		30			~						·
(TA) 8/29/	- 50 				OCAT, Sun, DIOWN and gray with Silt pockets		- 	-								О		
FUGRO SO (LAB DATA)	_				- with silt seams at 53'		87		37	37	19	18 _			A Property Control of the Control of			3.1
ļ					gray at 58'										C)		
4./2000\G\MTW\04150082.GPJ		. Wa			oured during drilling. bols defined on Plate 13.					TOTA CAVE	L DE	ne 8, 2 PTH: EPTH: ER: N	100. Not	Appli				
4.12000\GINT\		<i>:</i>			see					WET BACK	ROTA (FILL	ARY: : Cem T. Mi	0 to nent-f	100.0	•	∂rout		

LOG OF BORING NO. FS-4
TEXAS CITY INTERNATIONAL TERMINALS
PHASE 1 IMPROVEMENTS
TEXAS CITY, TEXAS



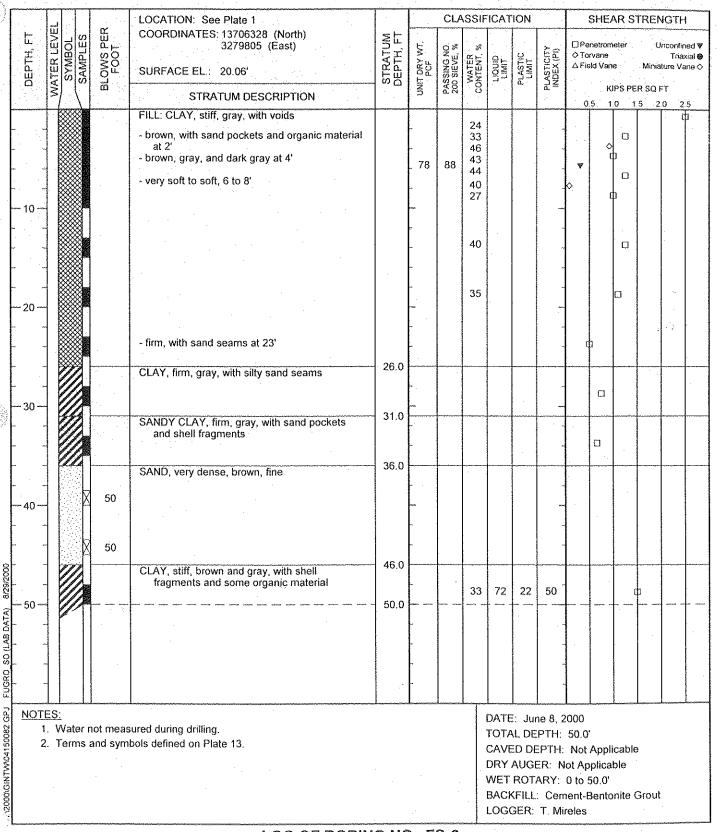




LOG OF BORING NO. FS-4
TEXAS CITY INTERNATIONAL TERMINALS
PHASE 1 IMPROVEMENTS
TEXAS CITY, TEXAS

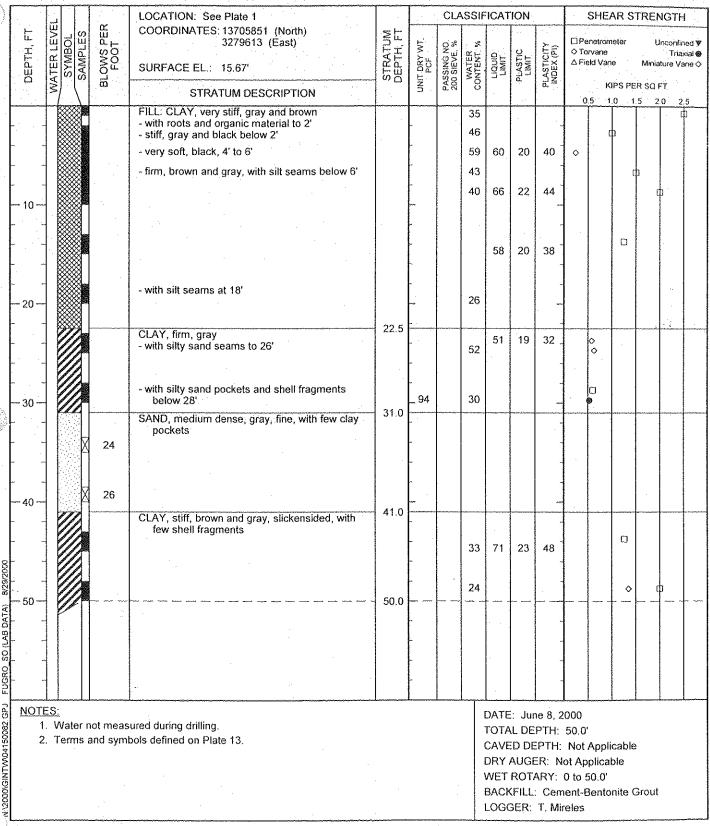






LOG OF BORING NO. FS-6
TEXAS CITY INTERNATIONAL TERMINALS
PHASE 1 IMPROVEMENTS
TEXAS CITY, TEXAS





LOG OF BORING NO. FS-7
TEXAS CITY INTERNATIONAL TERMINALS
PHASE 1 IMPROVEMENTS
TEXAS CITY, TEXAS



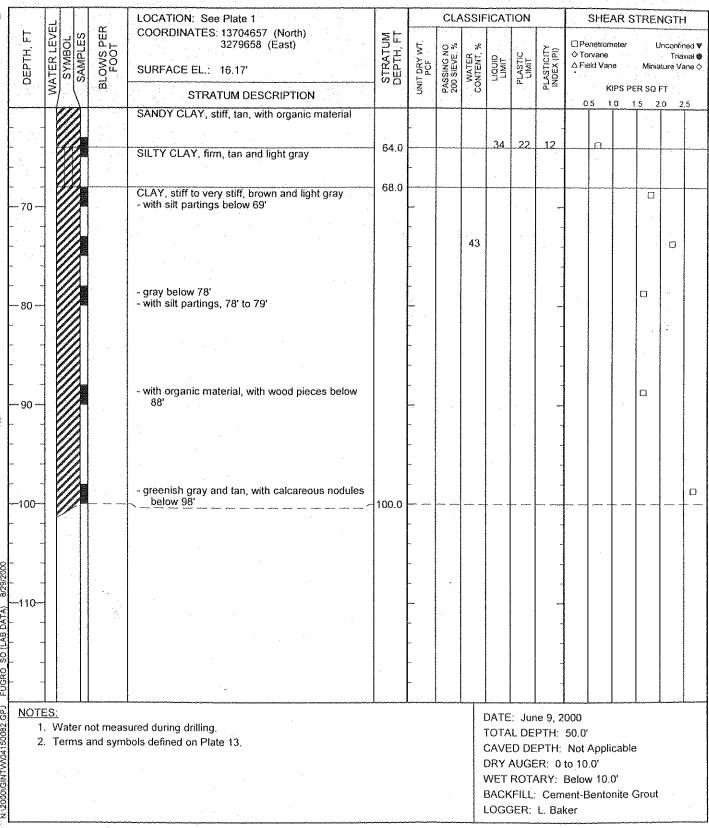


		П		LOCATION: See Plate 1			CLA	SSIF	ICAT	ION		<u> </u>	SHEAR STRENGTH				
DEPTH, FT	WATER LEVEL	SAMPLES	BLOWS PER FOOT	COORDINATES: 13704657 (North) 3279658 (East) SURFACE EL.: 16.17' STRATUM DESCRIPTION	STRATUM DEPTH, FT	UNIT DRY WT. PCF	PASSING NO. 200'SIEVE, %	WATER CONTENT, %	LIQUID	PLASTIC LIMIT	PLASTICITY (NDEX (Pt)	ΦFi		e IPS PE	Minial R SQ F	ture Va	xial 🛭
 	1 🔯		0.000 CO.000	FILL: CLAY, stiff, gray, tan, and brown	· · · · · · · · · · · · · · · · · · ·		···		·		*************************	<u> </u>).5 1	0 1	3 2 d		! 5
	-			- with roots to 1' - with sand pockets and organic material below 2' - very soft, black, with petroleum odor at 6'				30 45 46				♦				· ·	Andre de designe de de designe de designe de la constante de l
10 -			WOH	 very soft 8.5 to 10' firm, light gray and tan, with sand pockets below 13' 		50°	***************************************	46			-						
- 20 -			асуунундаанууда айан экуппарууна айа айгуал	- tan, with sand partings below 18'		- Control of the Cont			55	18	37 -					-	Minute & Andrew Communication of the Communication
				SILTY CLAY, soft to firm, light gray with sand, 23' to 25'	23.0	7					 - -	0				· ė	
-30-				- tan and light gray, with silt pockets below 28	30.0			26			-		а	٥			
		X	30	SAND, medium dense, tan, fine							-						
40-				CLAY, stiff, tan and light gray, with silt pockets - light gray and tan below 39' - with organic material at 40'	37.5			35			- -						
2000				- red and light gray				27			-						
50 -			V	- light gray and tan at 53'	-	-		2.1			- -			اسا	***************************************)
FUGNO SO (LAB DA (A)				- with organic material below 53' - with calcareous nodules, 53' to 54' - very stiff below 54' SANDY CLAY, stiff, tan, with organic material	58.0		***************************************	Vol. v v * v v v v v v v v v v v v v v v v	47	23	24						
NOT	NOTES: 1. Water not measured during drilling, 2. Terms and symbols defined on Plate 13.								DATE TOTA CAVE DRY WET BACK	: Jur L DE D DE AUGE ROTA	ne 9, 2 PTH: PTH: R: 0 ARY: Cem	50.0 Not to 10 Belor ent-f	Appli).0' w 10.	cable		,	ommost to

LOG OF BORING NO. FS-8
TEXAS CITY INTERNATIONAL TERMINALS
PHASE 1 IMPROVEMENTS
TEXAS CITY, TEXAS

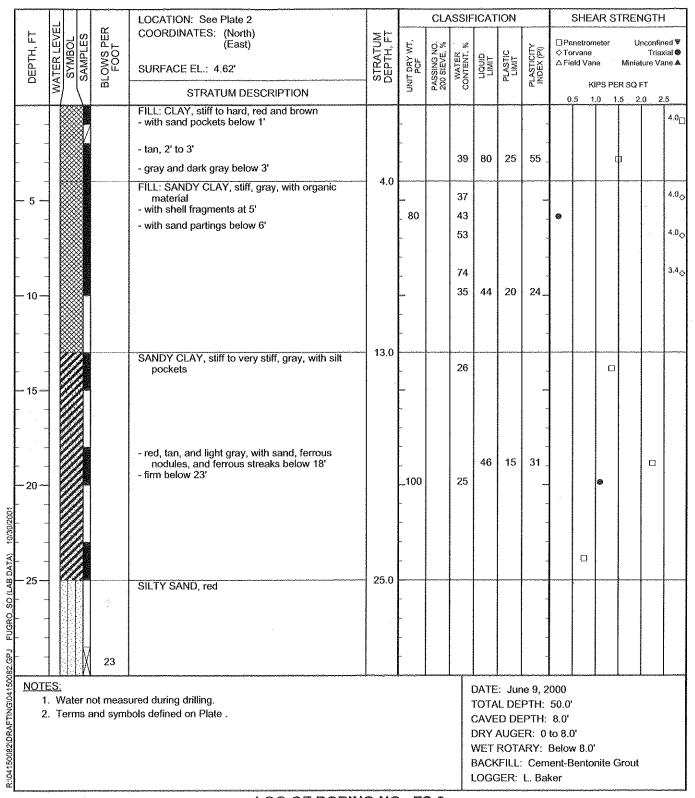


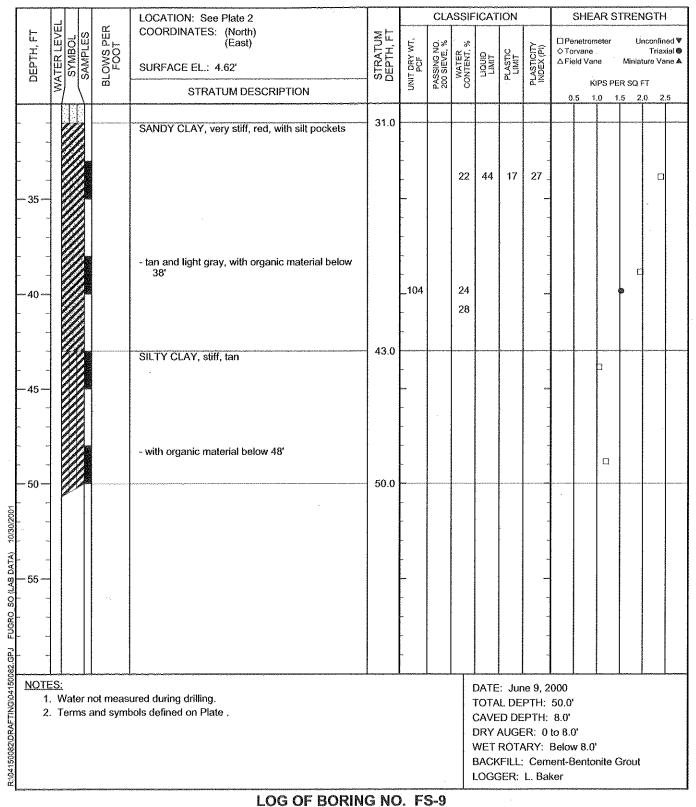




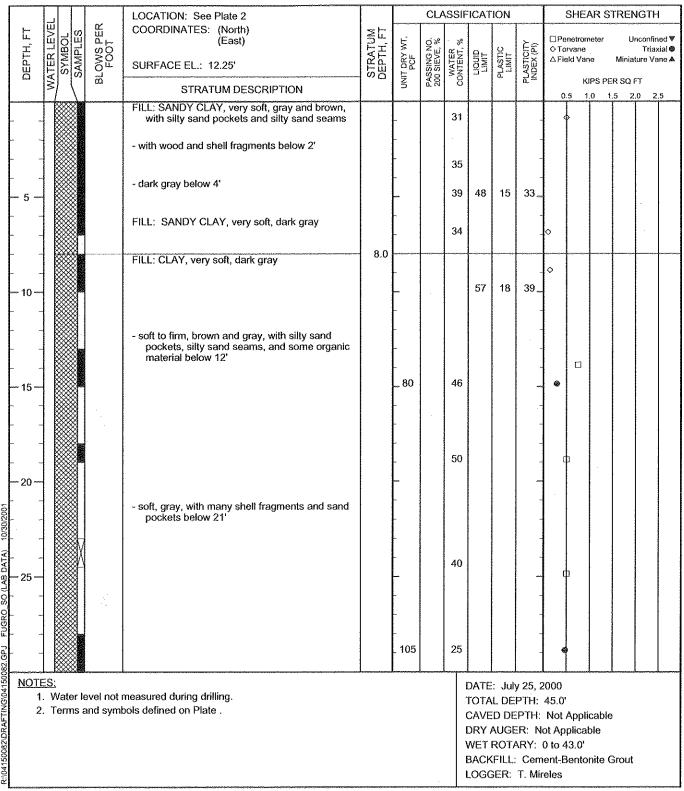
LOG OF BORING NO. FS-8
TEXAS CITY INTERNATIONAL TERMINALS
PHASE 1 IMPROVEMENTS
TEXAS CITY, TEXAS

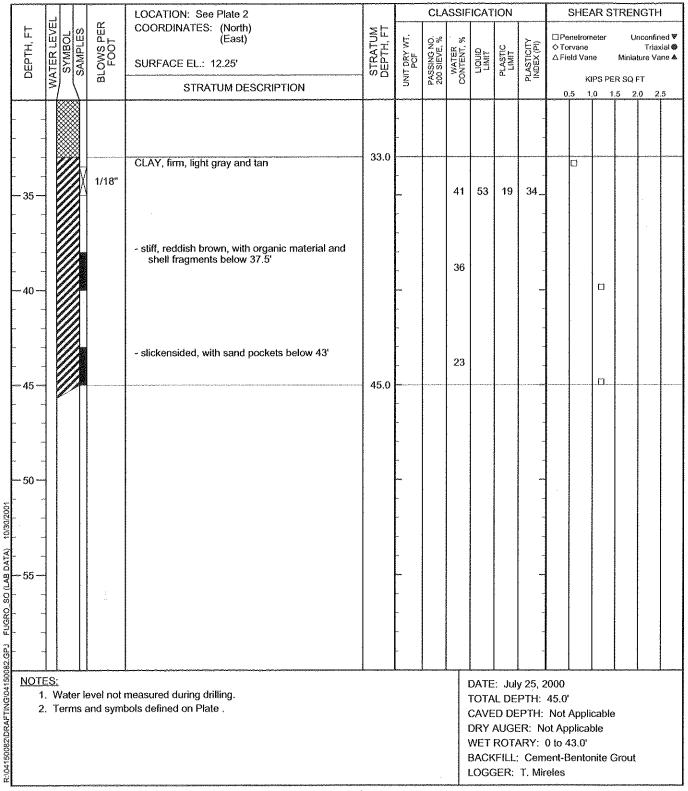




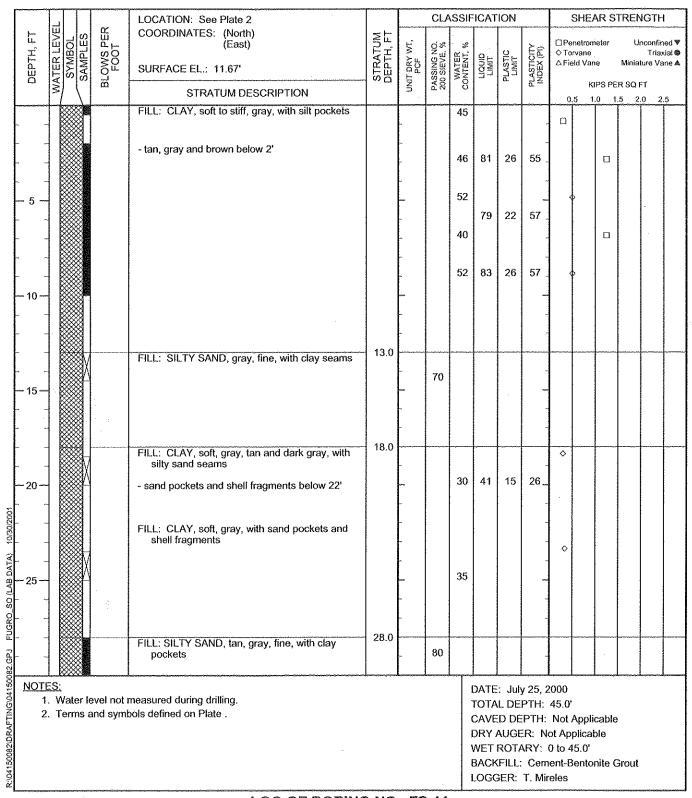


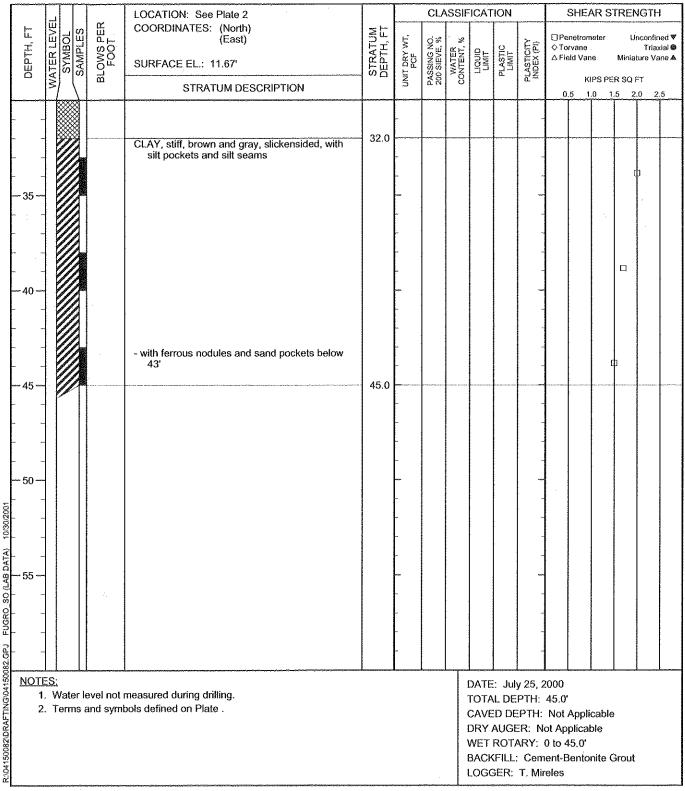
TEXAS CITY INTERNATIONAL TERMINALS
PHASE 1 IMPROVEMENTS
TEXAS CITY, TEXAS



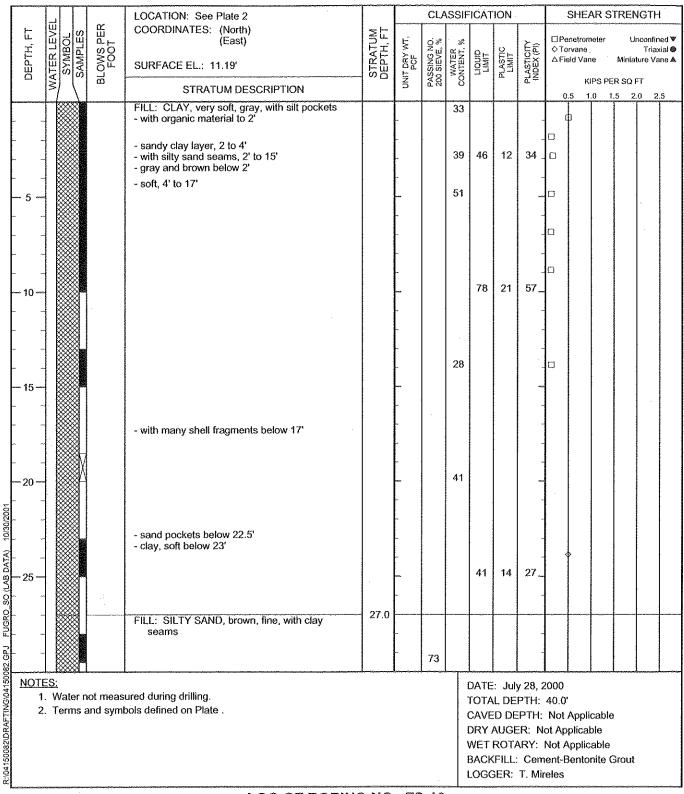


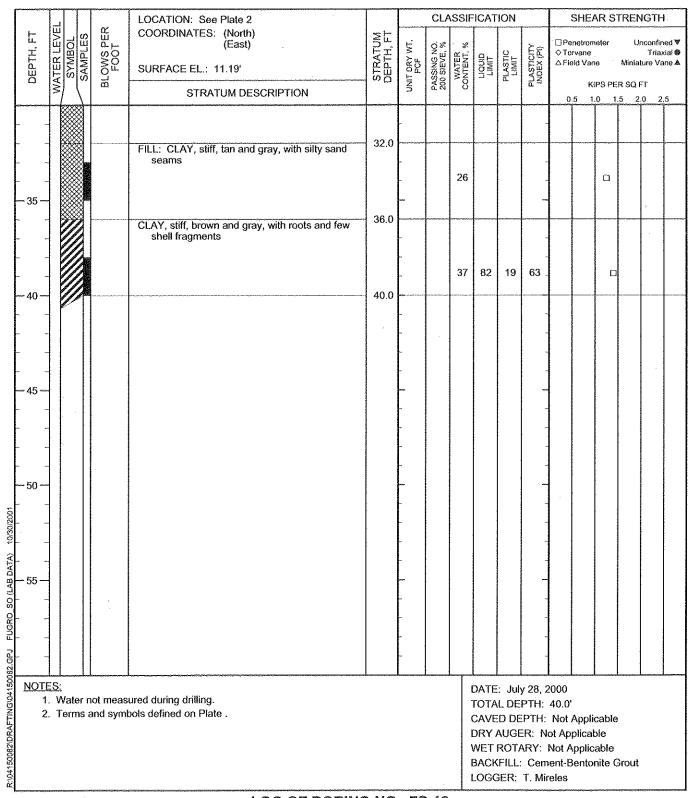
LOG OF BORING NO. FS-10
TEXAS CITY INTERNATIONAL TERMINALS
PHASE 1 IMPROVEMENTS
TEXAS CITY, TEXAS



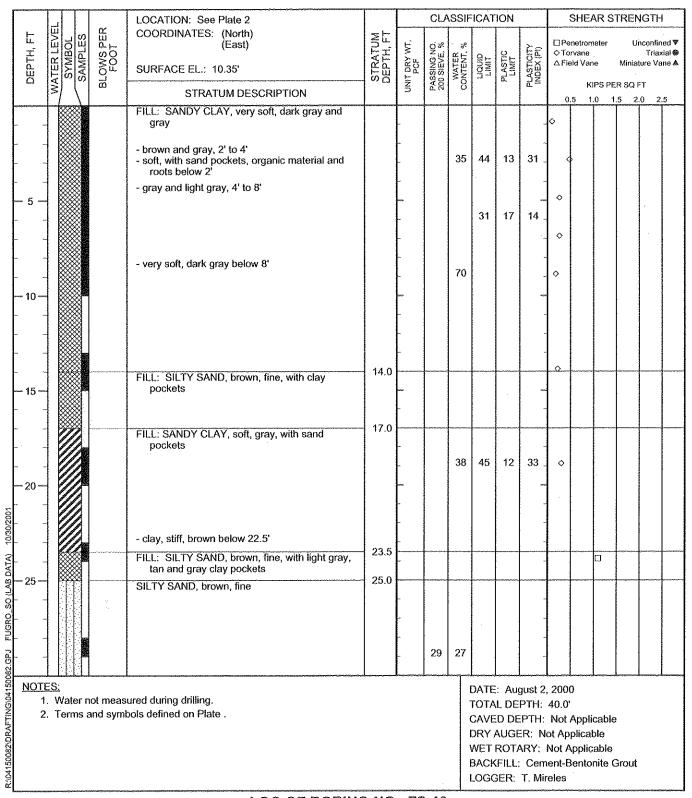


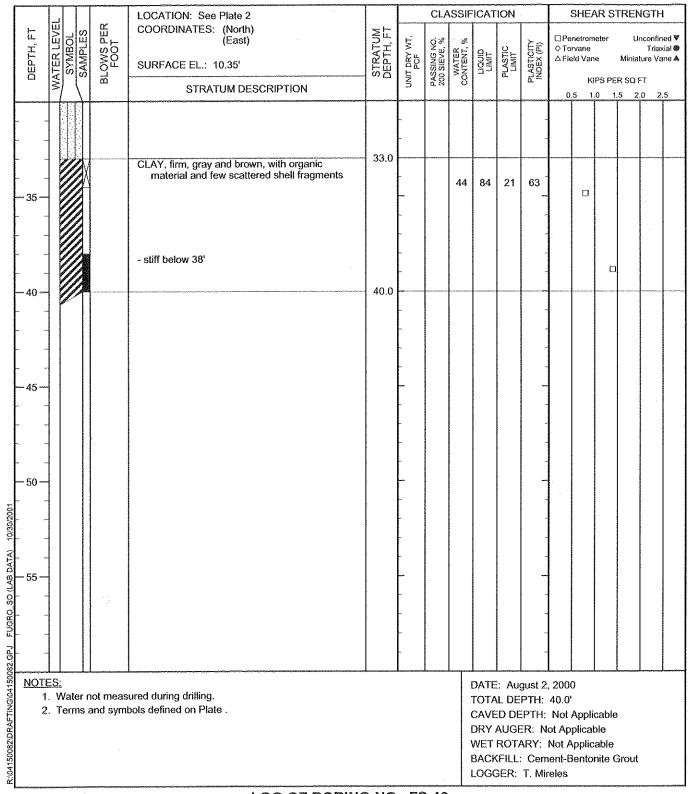
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TEXAS CITY INTERNATIONAL TERMINALS
PHASE 1 IMPROVEMENTS
TEXAS CITY, TEXAS

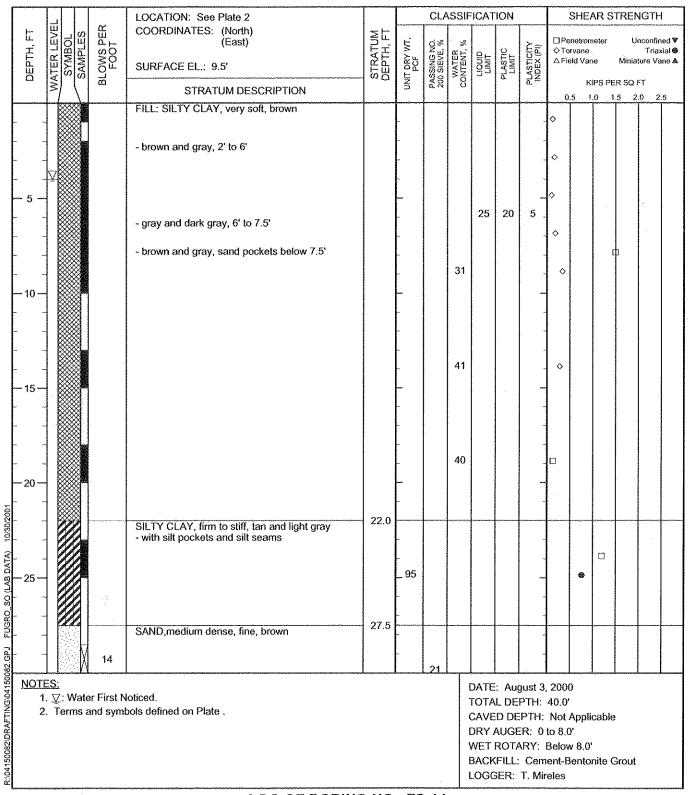


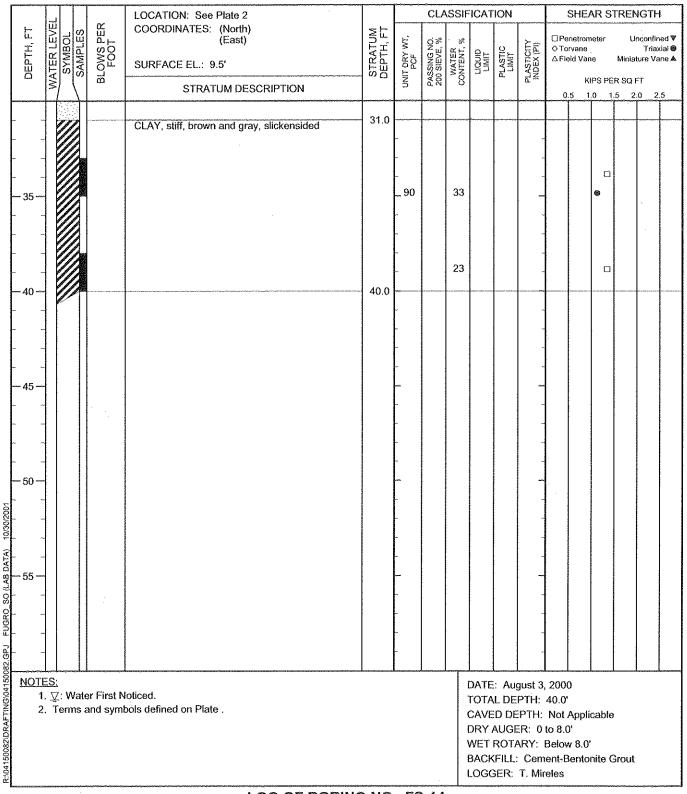


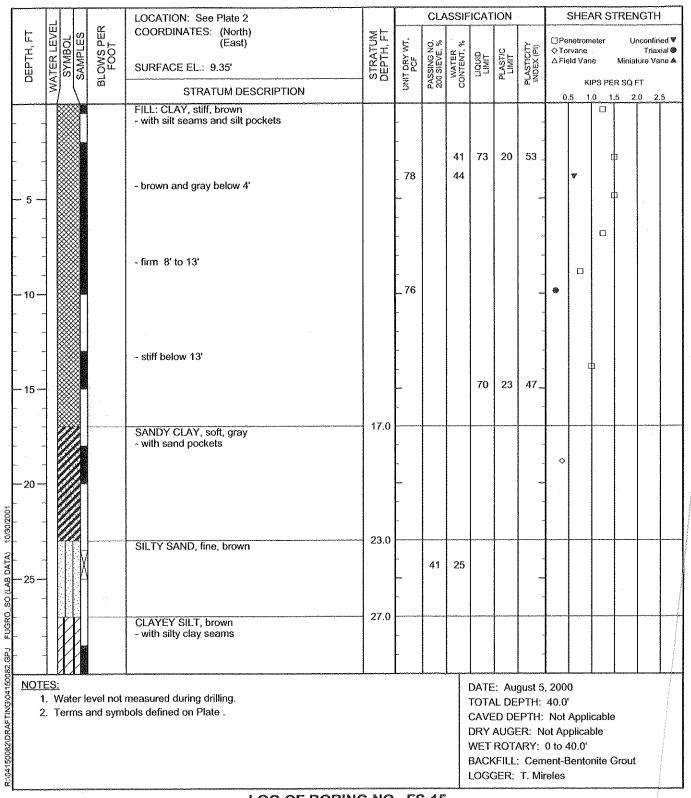
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PHASE 1 IMPROVEMENTS
TEXAS CITY, TEXAS



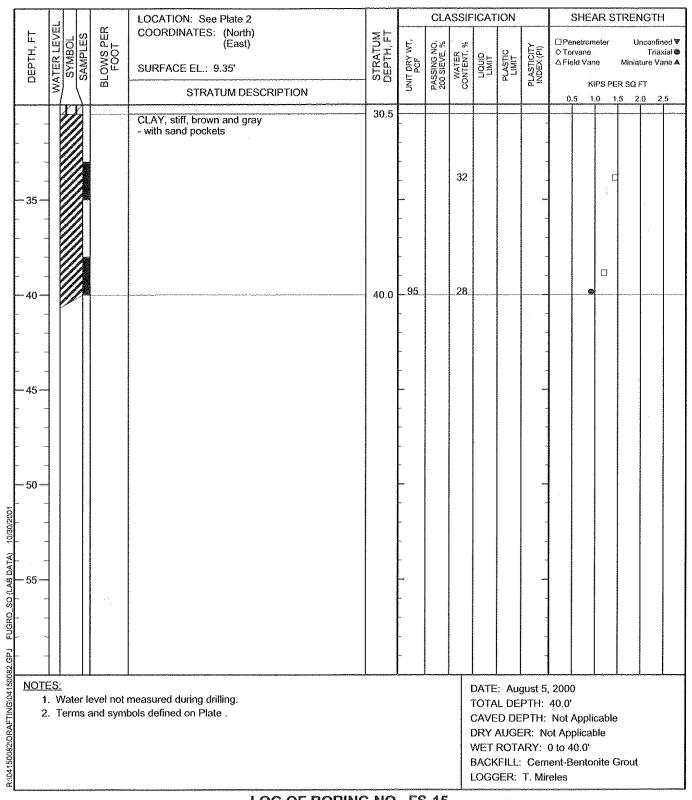


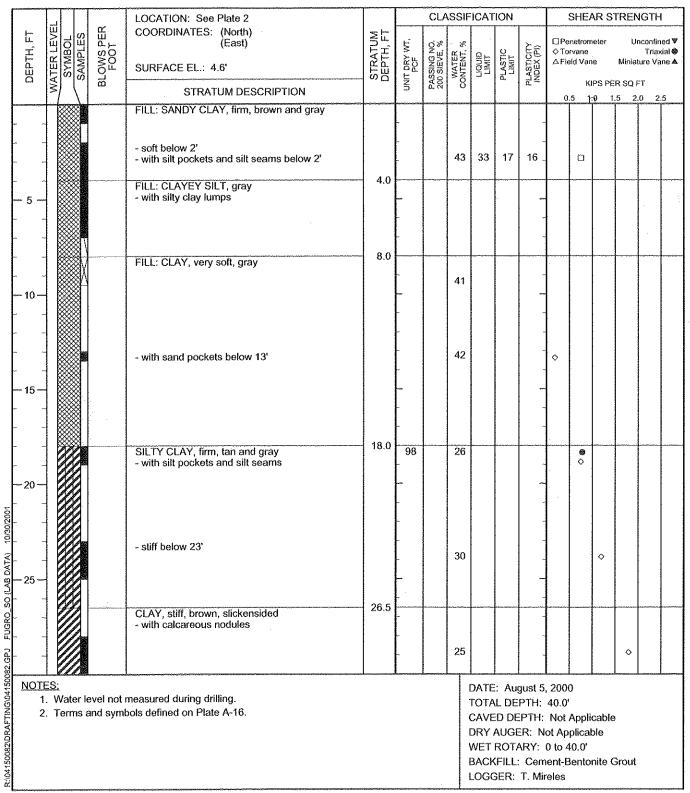




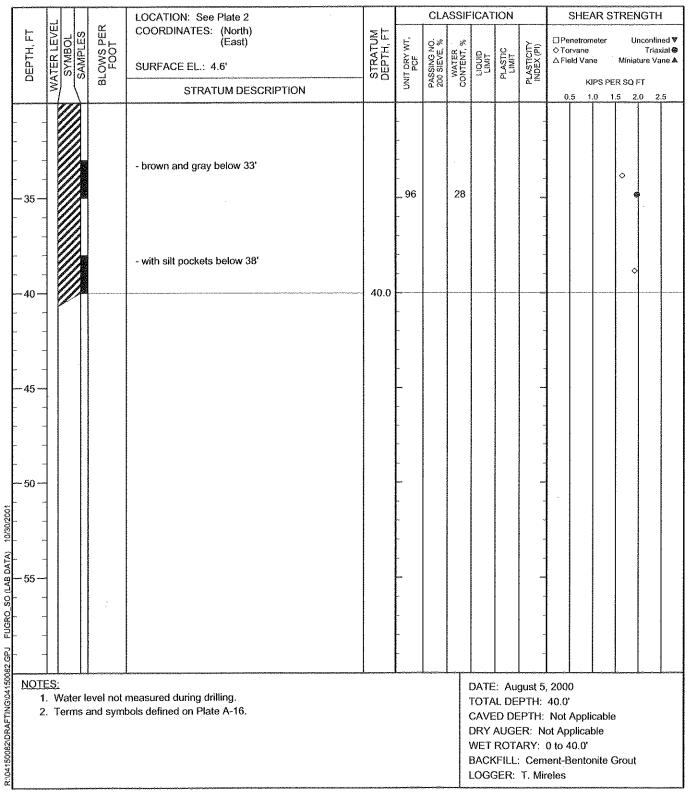


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PHASE 1 IMPROVEMENTS
TEXAS CITY, TEXAS

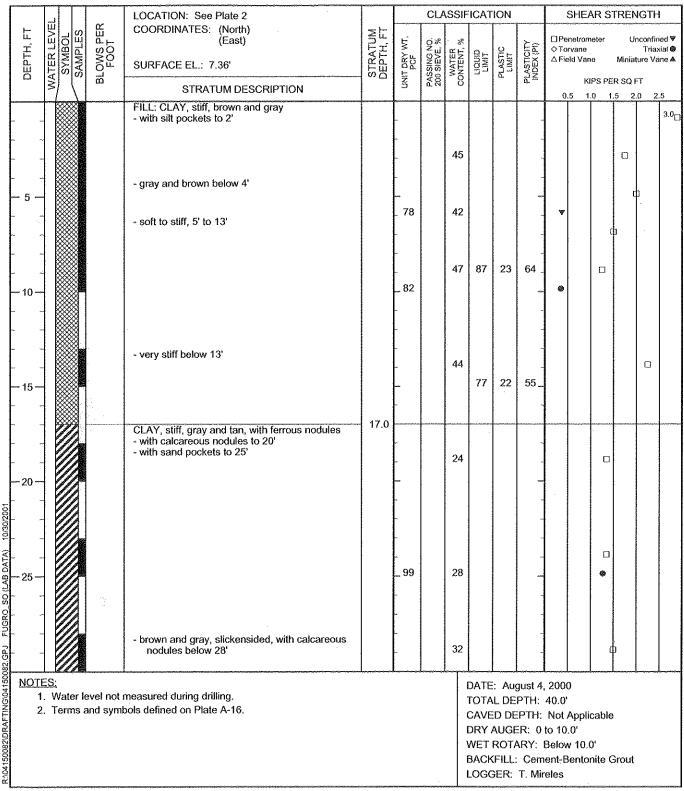


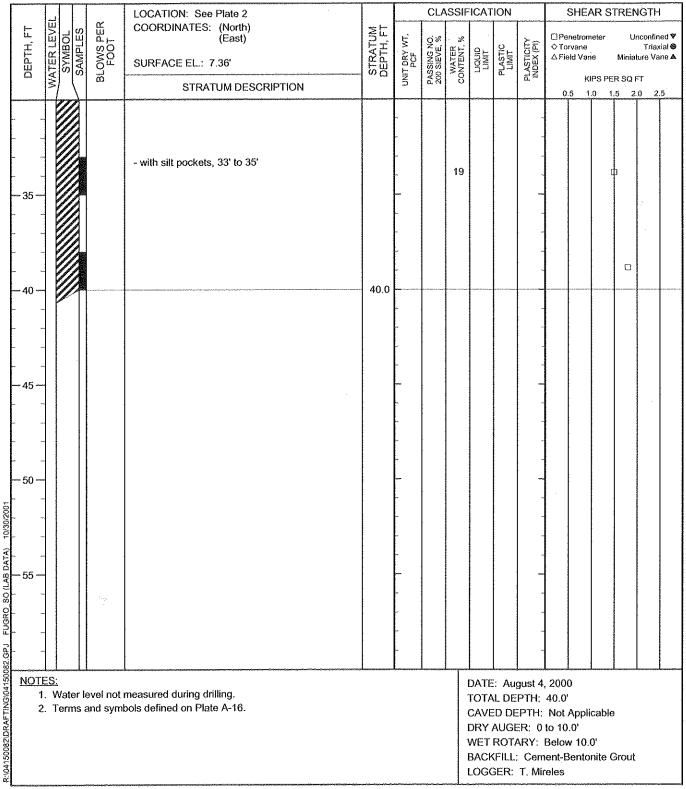


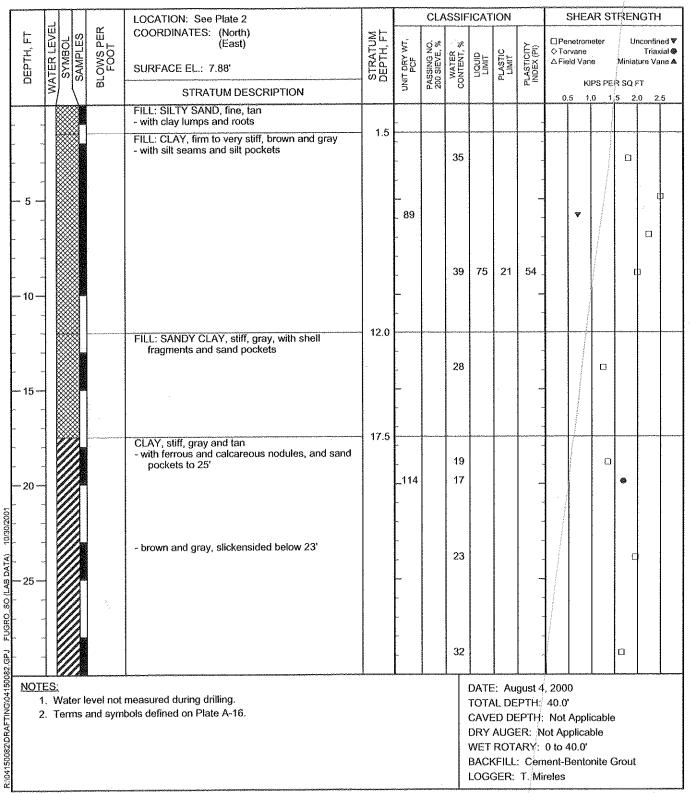
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TEXAS CITY INTERNATIONAL TERMINALS
PHASE 1 IMPROVEMENTS
TEXAS CITY, TEXAS



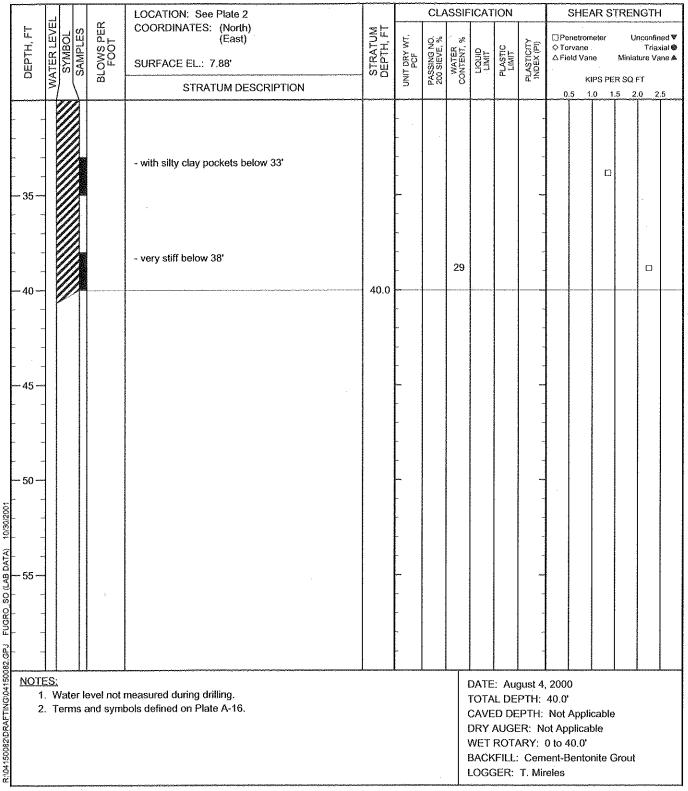
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TEXAS CITY INTERNATIONAL TERMINALS
PHASE 1 IMPROVEMENTS
TEXAS CITY, TEXAS





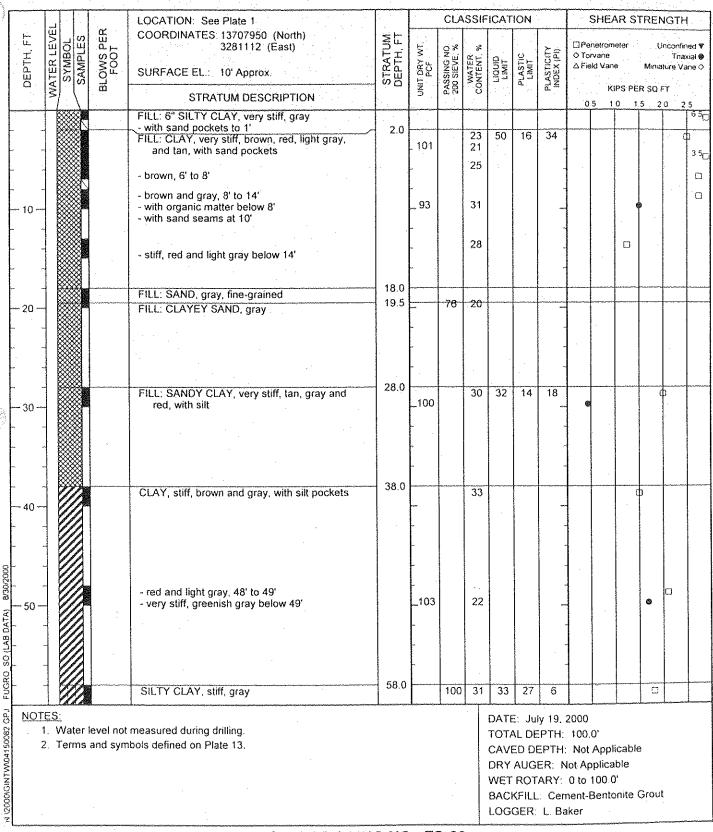


LOG OF BORING NO. FS-18
TEXAS CITY INTERNATIONAL TERMINALS
PHASE 1 IMPROVEMENTS
TEXAS CITY, TEXAS



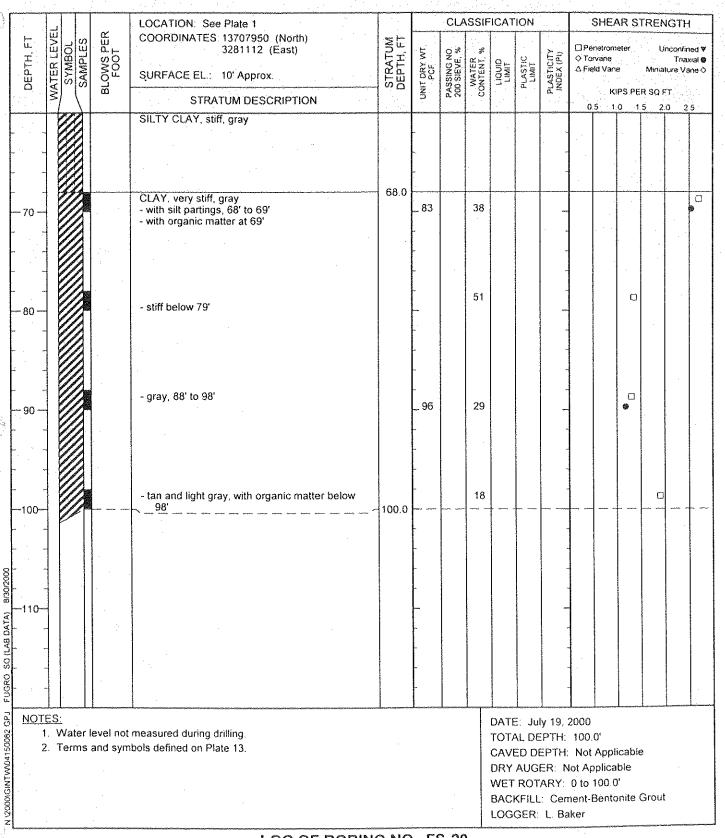
LOG OF BORING NO. FS-18
TEXAS CITY INTERNATIONAL TERMINALS
PHASE 1 IMPROVEMENTS
TEXAS CITY, TEXAS





LOG OF BORING NO. FS-20
TEXAS CITY INTERNATIONAL TERMINALS
PHASE 1 IMPROVEMENTS
TEXAS CITY, TEXAS

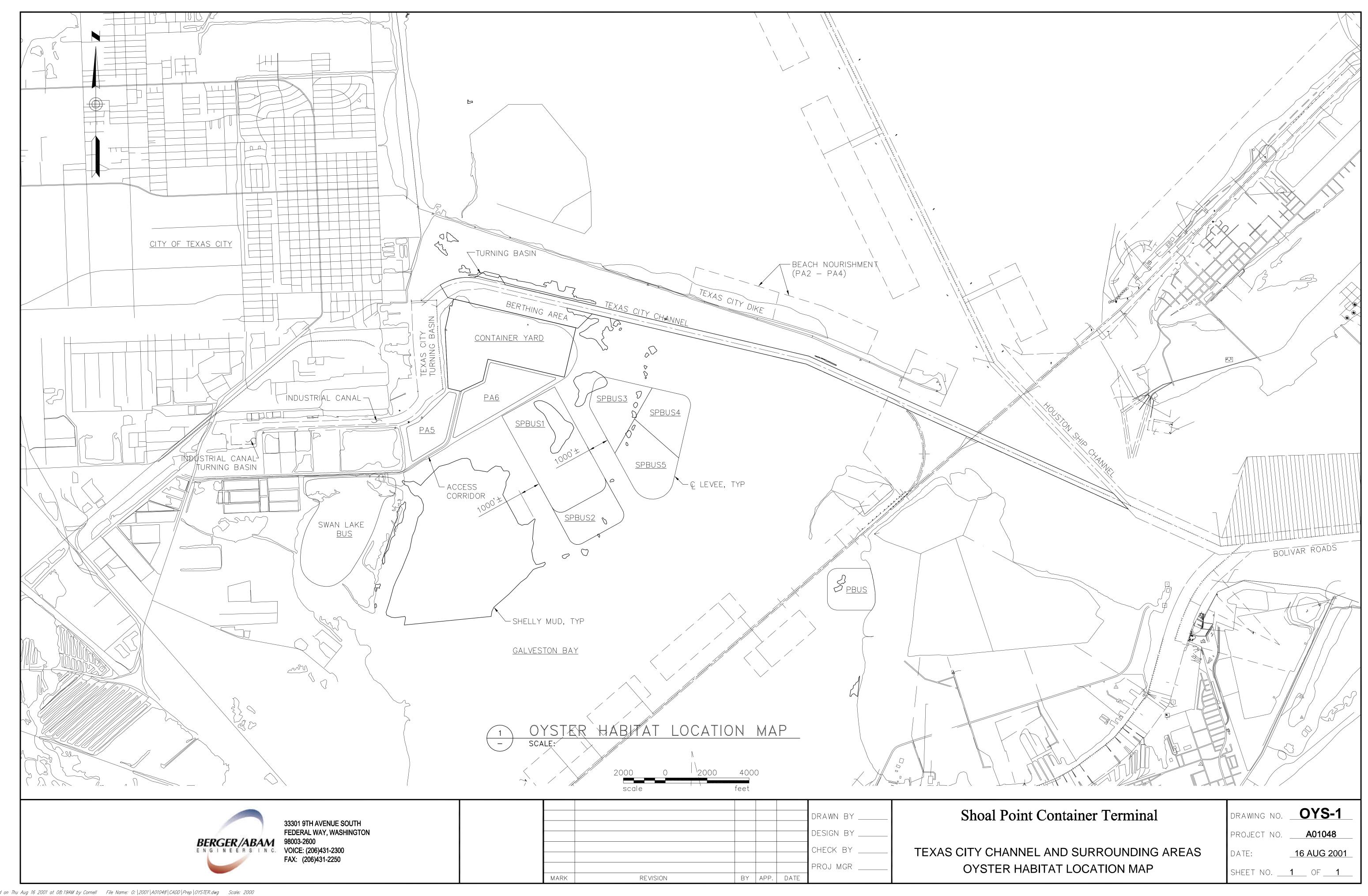






LOG OF BORING NO. FS-20
TEXAS CITY INTERNATIONAL TERMINALS
PHASE 1 IMPROVEMENTS
TEXAS CITY, TEXAS

Appendix C – Side-Scan S	Sonar Oyster Habit Locat	ion Map



$\mathbf{A}_{\mathbf{j}}$	ppendix D – Oyster Groun	nd-Truthing Results	

Appendix D - Oyster Ground-Truthing Results

Station	Date	Time	Substrate Composition	% Live	% Dead	Juvenile (<50mm)	Sub- Adult (50- 75mm)	Market Size (Adult >76mm)	Total Live Oysters	# Live	# Dead
1	4/19/2001	1221	Shell/Oyster	0	100%				0	0	3
2	4/19/2001	1227	Shell/Oyster	0	100%				0	0	3
3	4/19/2001	1249	Shell/Oyster								
4	4/19/2001	1255	Shell/Oyster	0	100%				0	0	4
5	4/19/2001	1236	Shell/Oyster	0	100%				0	0	4
6	4/19/2001	1303	Shell								
7	4/19/2001	1310	Shell								
8	4/19/2001	1322	Shell/Oyster	0	100%				0	0	6
9	4/19/2001	1319	Shell/Oyster	0	100%				0	0	2
10	4/18/2001	1605	*Mud/Shell (75/25)								
11	4/18/2001	1613	Shell								
12	4/18/2001	1559	Shell								
13	4/18/2001	1555	Shell								
14	4/18/2001	1552	Shell								
15	4/18/2001	1300	Shell								
16	4/18/2001	1315	Shell								
17	4/18/2001	1320	Shell								
18	4/18/2001	1324	Shell								
19	4/18/2001	1333	Shell/Oyster	0	100%				0	0	3
20	4/18/2001	1342	Shell								

Station	Date	Time	Substrate Composition	% Live	% Dead	Juvenile (<50mm)	Sub- Adult (50- 75mm)	Market Size (Adult >76mm)	Total Live Oysters	# Live	# Dead
21	4/18/2001	1348	Shell								
22	4/18/2001	1516	Sand								
23	4/18/2001	1356	Shell								
24	4/18/2001	1505	Shell/Mud								
25	4/18/2001	1543	Shell								
26	4/18/2001	1535	*Mud/Shell (50/50)								
27	4/18/2001	1526	*Mud/Shell (50/50)								
28	4/18/2001	1501	Small Shell								
29	4/18/2001	1448	Shell/Oyster	0	100%				0	0	2
30	4/23/2001	1253	Shell/Oyster	0	100%				0	0	1
31	4/23/2001	1303	Shell/Oyster	0	100%				0	0	6
32	4/23/2001	1309	Shell/Oyster	0	100%				0	0	8
33	4/23/2001	1258	Shell								
34	4/23/2001	1342	Shell								
35	4/23/2001	1350	Shell/Oyster	0	100%				0	0	1
36	4/23/2001	1359	Oyster	0	100%				0	0	33
37	4/23/2001	1413	Shell/Oyster	0	100%				0	0	6
38	4/19/2001	1047	Shell/Oyster	0	100%				0	0	1
39	4/19/2001	1039	Shell								
40	4/19/2001	1027	Shell/Oyster	0	100%				0	0	1

Station	Date	Time	Substrate Composition	% Live	% Dead	Juvenile (<50mm)	Sub- Adult (50- 75mm)	Market Size (Adult >76mm)	Total Live Oysters	# Live	# Dead
41	4/19/2001	0935	Shell/Oyster	0	100%				0	0	1
42	4/23/2001	1317	Oyster	20%	80%	9	4	4	17	17	66
42a*	4/23/2001	1333	Shell	0	100%				0	0	6
43	4/19/2001	1003	Oyster	0	100%				0	0	19
44	4/19/2001	0951	*Sand/Shell (50/50)	0	100%				0	0	6
45	4/18/2001	1439	Shell								
46	4/23/2001	1448	Mud								
47	4/23/2001	1444	Oyster; *Mud/Shell/Rocks (40/30/30)	0	100%				0	0	5
48	4/23/2001	1435	Mud								
49	4/23/2001	1430	Mud								
50	4/23/2001	1421	Mud								
51	4/19/2001	1136	Sand								
52	4/19/2001	1133	Sand								
53	4/19/2001	1129	Sand								
54	4/19/2001	1125	Sand								
55	4/19/2001	1115	Sand								
56	4/19/2001	1120	Shell								
57	4/19/2001	1104	*Mud/Shell (60/40)								
58	4/19/2001	1059	Sand								

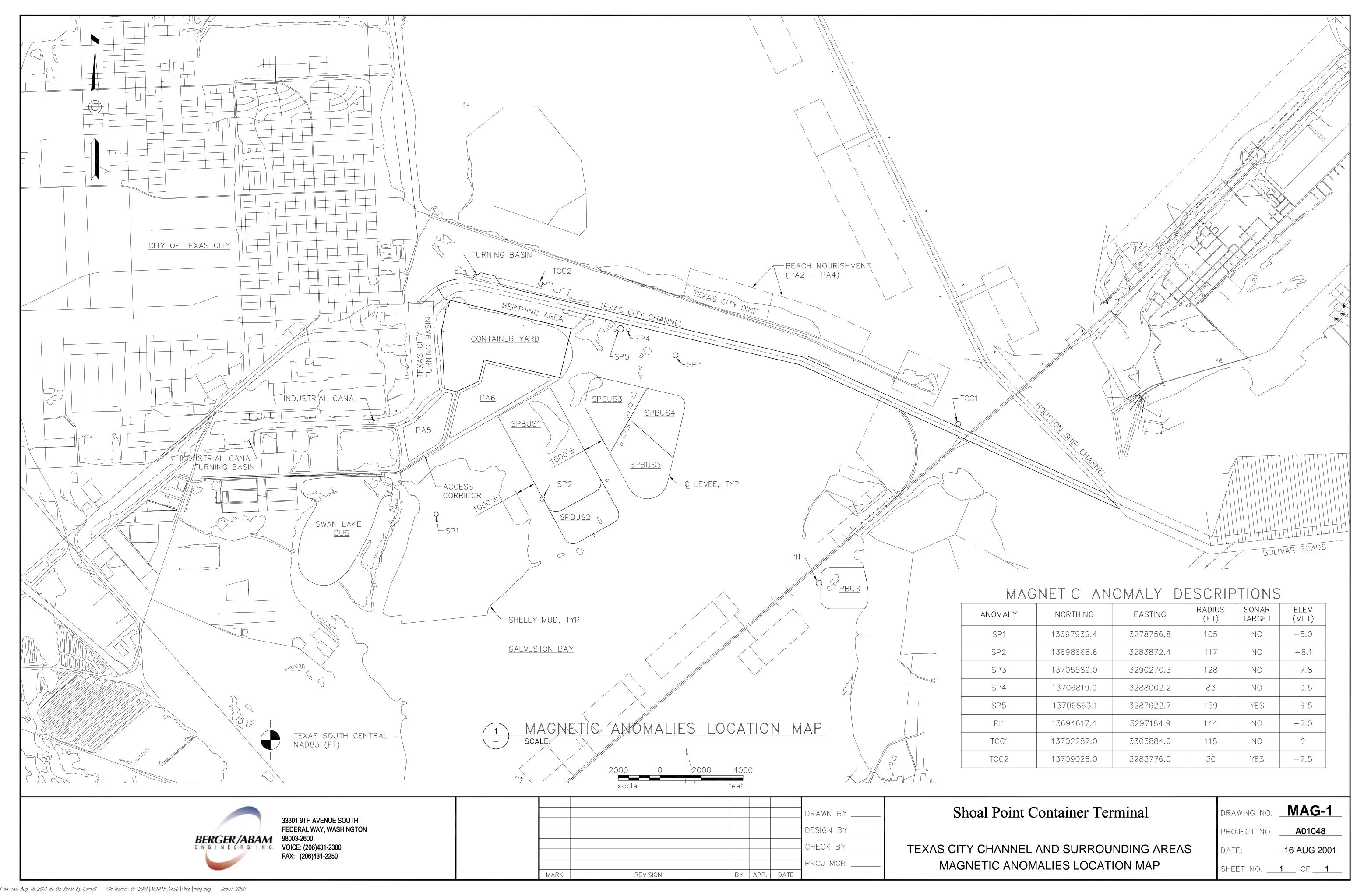
Station	Date	Time	Substrate Composition	% Live	% Dead	Juvenile (<50mm)	Sub- Adult (50- 75mm)	Market Size (Adult >76mm)	Total Live Oysters	# Live	# Dead
59	4/19/2001	1642	Sand								
60	4/19/2001	1648	Oyster	0	100%				0	0	13
61	4/19/2001	1700	Concretions							-	
62	4/19/2001	1708	Sand								
63	4/24/2001	1202	Mud								
64	4/24/2001	1204	Mud								
65	4/24/2001	1209	Mud								
66	4/24/2001	1243	Sand								
67	4/24/2001	1250	Oyster; *Mud/Shell (60/40)	0	100%				0	0	1
68	4/24/2001	1245	Oyster; *Mud/Shell (50/50)	0	100%				0	0	1
69	4/19/2001	1516	Shell								
70	4/19/2001	1519	Shell								
73	4/19/2001	1447	Sand								
74	4/19/2001	1450	*Sand								
75	4/19/2001	1459	Sand								
76	4/19/2001	1431	Sand								
77	4/19/2001	1437	Shell/Oyster	0	100%				0	0	2
78	4/20/2001	0948	Mud/Oyster	0	100%				0	0	3
79	4/20/2001	0941	Shell/Mud/Oyster	0	100%				0	0	2

Station	Date	Time	Substrate Composition	% Live	% Dead	Juvenile (<50mm)	Sub- Adult (50- 75mm)	Market Size (Adult >76mm)	Total Live Oysters	# Live	# Dead
80	4/20/2001	0956	Oyster	0	100%				0	0	54
81	4/20/2001	1011	*Mud								
82	4/20/2001	1035	Sand								
83	4/20/2001	1028	Sand								
84	4/20/2001	0932	Mud								
85	4/24/2001	1101	*Mud/Shell (50/50)								
86	4/24/2001	1119	Sand								
87	4/24/2001	1123	Mud/Shell								
88	4/24/2001	1129	Shell								
89	4/24/2001	1325	Mud								
90	4/24/2001	1335	Mud								
91	4/24/2001	1330	Mud								
92	5/4/2001	0900	Shell	0	100%						16
93	5/4/2001	0910	Shell	0	100%						1
94	5/4/2001	0920	Mud/Shell	0	100%						2
95	8/13/01	1620	Clay								
96	8/13/02	1550	Clay								
97	8/13/03	1540	Clay								
98	8/13/04	1524	Shell								
99	8/13/05	1500	Shell								
100	8/13/06	1453	Clay								

Station	Date	Time	Substrate Composition	% Live	% Dead	Juvenile (<50mm)	Sub- Adult (50- 75mm)	Market Size (Adult >76mm)	Total Live Oysters	# Live	# Dead
101	8/13/07	1436	Shell								
102	8/13/08	1422	Sand								
103	8/13/09	1409	Shell								
104	8/13/10	1343	Shell								
105	8/13/11	1328	Sand/Shell								
106	8/13/12	1317	Shell								
107	8/13/13	1256	Shell								
108	8/13/14	1234	Clay								
109	8/13/15	1151	Sand								
C1	4/24/2001	1530	Mud								
C2	4/24/2001	1522	Sand								
C3	4/24/2001	1546	Sand								
C4	4/24/2001	1613	*Mud/Shell (90/10)								
C5	4/24/2001	1605	Sand								
С6	4/24/2001	1558	Mud								
C7	4/24/2001	1509	Mud								
C8	4/24/2001	1502	Mud								
С9	4/24/2001	1226	Sand								
C10	4/24/2001	1219	Mud								
C11	4/24/2001	1232	Mud								
C12	4/24/2001	1237	Mud								

Station	Date	Time	Substrate Composition	% Live	% Dead	Juvenile (<50mm)	Sub- Adult (50- 75mm)	Market Size (Adult >76mm)	Total Live Oysters	# Live	# Dead
C13	4/19/2001	1527	Sand								
C14	4/19/2001	1536	Sand								
C17	4/20/2001	0936	Sand								
C18	4/20/2001	1020	Sand								





Appendix F - Dredged Material Placement Schedule

2-Aug-01

Shoal Point Container Terminal Dredge Material Management Plan Dredge Schedule - Summary

				In-	Situ Material Volume	••
Description	Levee Length (ft)	Levee Footprint (acres)	Interior Area* (acres)	Capital Grade	Maintenance Grade	Total
Developed Areas			-		and the state of t	
Shoal Point Phase II Fill			118	1,040,000	-	1,040,000
Shoal Point Phase III Fill	-	-	144	520,000	200,000	720,000
Subtotal ***		-	262	1,560,000	200,000	1,760,900
Piacement Areas (PA)						
Shoal Pont PA 5 - Levees	8,900	32			1,176,000	1,176,000
Shoal Point PA 6 - Levees	13,500	48	-	_ [2,365,000	2,365,000
State of the state	20,000	***		_	2,000,000	2,000,000
Shoal Point PA 5 - Site	.	_	90	_ {	1,259,000	1,259,000
Shoal Point PA 6 - Site	*		165	_ {	4,235,000	4,235,000
Subtotal	22,400	80	255	_	9,035,000	9,035,000
	22,100		200		0,000,000	2,033,030
Texas City Dike Beach Nourishment (PA2 to PA4)				-	19,500,000	19,500,000
Beneficial Use Sites (BUS)				·	namer V-rije	
Shoal Point BUS 1 - Levees	13,350	56	-	840,000	-	840,000
Shoal Point BUS 2 - Levees	6,950	30	-	465,000		465,000
Shoal Point BUS 3 - Levees	6,650	28	-	425,000	-	425,000
Shoal Point BUS 4 - Levees	9,250	40		620,000	.	620,000
Shoal Point BUS 5 - Levees	7.450	34	-	555,000	-	555,000
Pelican Island - Levees	5,750	18	-	185,000	-	185,000
Swan Lake - Site	+	-	363	1,875,000	-	1,875,000
Shoal Point BUS 1 - Site	-	-	357	1,695,000	4,440,000	6,135,000
Shoal Point BUS 2 - Site		-	115	665,000	1,450,000	2,115,000
Shoal Point BUS 3 - Site	_	-	138	170,000	2,350,000	2,520,000
Shoal Point BUS 4 - Site	~	-	120	-	2,340,000	2,340,000
Shoal Point BUS 5 - Site	-	-	161	-	3,440,000	3,440,000
Pelican Island BUS - Site	+		99	200,000	640,000	840,000
Subtotal	49,400	207	1,353	7,695,000	14,660,000	22,355,000
Total	,			9,255,000	43,395,000	52,650,000

^{*} Area (acres) is defined as area inside of centerline of levee.

^{**} In-Situ Volumes have all factors applied, including primary and secondary considation.

*** Acreage indicated is only for landside activities, wharf structure is considered separately (approximately 13 acres).

Shoal Point Container Terminal Preliminary Dredge Schedule

USACE Maintenance Dredging Annual Maintenance Volume: 780,000

Port of Texas City Users Group Maintenance Dredging Annual Maintenance Volume: 36,000

Typical 3-year Maintenance Cycle:

2,340,000

Typical 3-year Maintenance Cycle:

108,000

Maintenance Dredging Distribution Beach Feed 50% Shoal Point 50%

		Maintenan	ce Dredging		7 S 9 S	New Wor	k Dredging		50000	
Year									Total	Cumulative Total
2.50	Beach Feed	Shoal Point	POTC	SubTotal	Berthing Area	Turning Basin	Channel Deepening	Total		E en el el el el
							12255			
2002										
2002					3,000,000		and the state of t	3,000,000	3,000,000	3,000,000
2003					to a first decision of the contract of the first of the f		<u> </u>		,-	3,000,000
2004	1,170,000	1,170,000	900,801	2,448,000					2,448,000	5,448,000
2005										5,448,000
2006	780,000	780,000	72,000	1,632,000	3,100,000	750,000	2,400,000	6,250,000	7,882,000	. 13,330,000
2007							Marketon de contrado a marced de la Marketon de Marketon de Marketon de Marketon de Marketon de Marketon de Ma	en marinere e constant communication de la constant		13,330,000
2008									·	13,330,000
2009	1,170,000	1,170,000	108,000	2,448,000					2,448,000	15,778,000
2010		-						·		15,778,000
2011				madrid de Common ed de control de						15,778,000
2012	1,170,000	1,)70,000	108,000	2,448,000			The second section of the second seco		2,448,000	18,226,000
2013	· · · · · · · · · · · · · · · · · · ·				2 500 500			2 600 000	7 500 000	18,226,000
2014	1270 000		109,000	2.148.000	2,600,000		<u></u>	2,600,000	2,600,000 2,448,000	20,826,000 23,274,000
2015	1,170,000	1,170,000	108,000	2,148,000	eret et annochet tambét aus et annochet annochet annochet annochet annochet annochet annochet annochet annoche				2,448,U(N)	
2016 2017					***************************************					23,274,000 23,274,000
2018	1,170,000	1,170,000	108,000	2,448,000					2,448,000	25,722,000
2019	1,170,000	Taropolo	100,000	2,440,000					2,770,000	25,722,000
2020									-	25,722,000
2021.	1,170,000	1,170,000	108,000	2,448,000					2,448,000	28,170,000
2022	-							-	_	28,170,000
2023	-	-	and the second s					,	-	28,170,000
2024	t,170,000	1,170,000	108,000	2,448,000	Proof on another month of committee to form the second on the t		To Profit habituation of Profit and State Provided at a control of		2,448,000	30,618,000
2025							-			30,618,000
2026	-	-		-						30,618,000
2027	1,170,000	1,170,000	108,000	2,448,000				-	2,448,000	33,066,000
2028										33,066,000
2029		-	,							33,066,000
2030	1,170,000	1,170,000	108,000	2,448,000					2,448,000	35,514,000
2031						and a feedful to the form of the feed of the control of the contro				35,514,000
2032										35,514,000
2033	1,170,000	1,170,000	108,000	2,448,000					2,448,000	37,962,000
2034								-		37,962,000
2035	-					<u>,,</u>				37,962,000
2036	1,170,000	1,170,000	t08,000	2,448,000		and and the state of a section	Name (not and the control of the con		2,448,000	40,410,000
2037				<u> </u>						40,410,000
2038				, , , , , , , , , , , , , , , , , , , ,		and the state and the state of				40,410,000
2039	1,170,000	1,170,000	108,000	2,448,000					2,448,000	42,858,000
2040						· · · · · · · · · · · · · · · · · · ·	·/··/·····			42,858,000
2041		3 270 000	loa see	7.449.000		an Panamahkat Nashan and Pan Pana C. Sashan and Panka	An' disambility and the standard and the	v================================	2 (10,000	42,858,000
2042	t,170,000	1,170,000	000,801	2,448,000				2°	2,448,000	45,306,000 45,306,000
2043					L	L				
2044 2045	1,170,000	1,170,000	108,000	2,448,000			· · · · · · · · · · · · · · · · · · ·		2,448,000	45,306,000 47,754,000
2045	1,170,000	LITOLOGO -	100,000	2,440,160	anna a' ann an 1964 a' ann a' ann a' an air a' ann a' a' a' an a'	Atantonia (1111)			4,410,000	47,754,000
2047										47,754,000
2047	1,170,000	£,170,000	108,000	2,448,000		and and the state of the state of a factor of the state o			2,448,000	50,202,000
2049		LAI VIVOV	100,000							50,202,000
2050		,	,							50,202,000
2051	1,170,000	1,170,000	108,000	2,448,000		.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			2,448,000	52,650,000
Totals	19,500,000	19,500,000	1,800,000	40,800,000	8,700,000	750,000	2,400,000	11,850,000		9/33/2001

Texas City Channel and Surrounding Areas 50-Year Dredge Material Management Plan Summary (cy)

		Develops	mnt Areas		Piaceme	nt Areas		(1) (1) (2) (1)	В	eneficial Use Sit	es				
Year	Dredging Activity	Phase II (125 scres)	Phase III (150 acres)	Beach Feed (PA 2 to PA 4)	Shoal Point PA 5 (90 acres)	Shoal Point PA 6 (160 scres)	Swan Lake (45 + 318 acres)	Shoal Point BUS 1 (357 acres)	Shoal Point BUS 2 (115 acres)	Shoel Point BUS 3 (138 acres)	Sheal Point BUS 4 (120 acres)	Shoal Point BUS 5 (161 acres)	Pelican Island (99 acres)	Yearly Totals	Cumulative Totals
2002	Shoal Point Container Terminal Phase I	1,040,000	720,000		<u> </u>	<u> </u>	460,000	840,000				Edouara in Laz Al Madas 1995		3,000,000	3,000,000
2004	Maintenance			1,170,000	108,000			1,170,000						2,448,000	5,448,000
2006	Shoal Point Container Terminal Phase II + Maintenance	10 mm		780,000	72,000		1,475,000	4,065,000	465,000				1,025,000	7,882,000	13,330,600
2009	Maintenance			1,170,000	108,000			900,000	270,000					2,448,000	15,778,000
2012	Maintenance	A	erromant lefere household house	1,170,000	208,000				1,070,000					2,448,000	18,226,000
2014	Shoal Point Container Terminal Phase III								775.000	650,000	620,000	568,000		2,600,000	20,826,000
2015	Maintenance		[]	1,170,000	108,000					1,170,000				2,448,000	23,274,000
2018	Maintenance			1,170,000	153,000					1,125,000				2,448,000	25,722,000
2021	Mzintenance			1,170,000	108,000						1,170,000			2,448,000	28,170,000
2024	Maintenance			1,170,000	108,000						1,170,000			2,448,000	30,618,000
2027	Maintenance			1,170,000	108.000						ALEXA CIPE VARIABLES	1.170.000		2,448,000	33,066,000
2030	Maintenance			1,170,000	108,000							1,170,000		2,448,000	35,514,000
2033	Maintenance			1,170,000	178,000							1,100,000		2,448,900	37,962,000
2036	Maintenance			1,170,000	178,000	1,100,000						ACCOUNT OF THE PERSON OF THE P		2,448,000	40,410,000
2039	Maintenance	-		1,170,000	178,000	1,100,000								2,448,000	42,858,000
2042	Maintenance			1,170,000	178,000	1,100,000								2,448,000	45,306,000
2045	Maintenance			1,170,000	178,000	1,100,000								2,448,900	47,754,000
2048	Maintenance			1,170,000	178,000	1,100,000								2,448,000	50,202,000
2051	Maintenance			1,170,000	178,000	1,100,000								2,448,000	52,650,000
Totals		1,040,000	720,000	19,500,000	2,435,000	6,600,000	1,875,000	6,975,000	2,580,000	2,945,000	2,960,000	3,995,000	1,025,000	52,850,000	
Cum. Totals		1	nent Areas	Beach Feed 19,500,000		ent Areas		•		Beneficial Use Site 22,355,000	28	•			

Shoal Point Container Terminal

Potential BUS & PA Parameters

	Shoal Point	Pelican	Swan Lake	Shoal Point	Shoal Point	Shoal Point		Total							
Description	BUS 1	BUS 2	BUSS	BUS 4	BUS 5	PA 5	PA 6	Island BUS	BUS	Phase I	Phase II	Phase III	BUS	Developed	PA
General Characteristics															
Area (acres)	357	115	138	120	161	90	165	99	363	118	118	144	1,353	380	255
Final Site Elevation (MLT)	2.5	2.5	2.5	2.5	2.5	26.0	26.0	2.5	2.5	16.0	16.0	16.0			
Exist. Site Elev. (MLT)	-7.2	-8.0	-7.3	-8.0	-8.9	7.0	8.8	-2.3	-0.9	18.1	11.4	10.4			
Unit Weight of Material (pcf)	58	58	58	58	58	120	120	58	58	120	120	120			
Vertical Spring Constant (lb/ft)	1,250	1,250	1,250	1,250	1,250	1,250	1,250	1,250	1,250	1,250	1,250	1,250			
Site Displacement (ft) - express in negative values -	-0.5	-0.5	-0.5	-0.5	-0.5	-1.8	-1.6	-0.2	-0.2	0.0	-0.4	-0.5			
Overall Height (ft)	9.7	10.5	9.8	10.5	11.4	19.0	17.2	4.8	3.4	4.6	4.6	5.6			
ΔVolume (Primary Consolidation) (yd ^s)	259,000	90,000	101,000	94,000	138,000	265,000	439,000	35,000	91,000		84,000	125,000			
Preliminary Neatline Site Volume (yd³)	5,849,000	2,040,000	2,279,000	2,127,000	3,107,000	3,022,000	5,007,000	794,000	2,054,000	-393,000	956,000	1,426,000	18,250,000	1,989,000	8,029,000
Land Development Site Volume (yd ³)	5,590,000	1,950,000	2,178,000	2,033,000	2,969,000	2,757,000	4,568,000	759,000	1,963,000	(393,000)	872,000	1,301,000			
Levee Characteristics															
Perimeter (ft)	13,350	6,950	6,650	9,250	7,450	8,900	13,500	5,750							
Final Crown Elev. (MLT)	+8.	+8.	÷8.	+8.	+8.	+30.	+30.	+8.	N/A						
Crown Width (ft)	30.0	30.0	30.0	30.0	30.0	20.0	20.0	30.0							
Bottom Width (ft)	184.0	190.0	185.1	190.0	199.9	155.9	156.2	133.1							
Exist. Site Elev. (MLT)	-7.4	-8.0	-7.5	-8.0	-9.0	7.3	7.3	-2.3							
Exist Water Elev (MLT)	2.0	2.0	2.0	2.0	2.0	2.0	2,0	2.0							
Side Slopes (H / V)	5	5	5	5	5.	3	3	5-							
Unit Weight of Material (pef)	58	58	58	58	58	120	120	58							
Vertical Spring Constant (lb/ft)	1,250	1,250	1,250	1,250	1,250	1,250	1,250	1,250				American de Leadin de La Contraction de La Contr			11000011.00011.00111.274.0000
Levee Displacement (ft) ~ express in negative values ~	-0.7	-0.7	-0.7	-0.7	-0.8	-2.2	-2.2	-0.5							A 10 10 10 10 10 10 10 10 10 10 10 10 10
Overall Height (ft)	15.4	16.0	15.5	16.0	17.0	22.7	22.7	10.3							
Area (yd ⁿ /ft)	61	65	62	65	72	74	74	31				The same to the sa	The state of the s		
AVolume (Primary Consolidation) (yd³)	65,000	36,000	33,000	48,000	43,000	112,000	170,000	14,000							
Preliminary Neatline Levee Volume (yd³)	880,000	489,000	444,000	651,000	582,000	769,000	1,170,000	193,000					3,239,000	-	1,939,000
Land Development Levee Volume (yd³)	815,000	453,000	411,000	608,000	539,000	657,000	1,000,000	179,000							

Notes

²⁾ Secondary Consolidation through consolidation factors is taken into account separately and is based on factors presented in other worksheet.

	Acreage	Volume (mcy)
Total BUS	1,353	21,489,000
Total Fill	380	1,989,000
Total PA	255	9,968,000
Total	1,988	33,446,000

¹⁾ Primary Consolidation is only accounted for in the existing substrate, I.E. - Foundation Material.

Shoal Point Container Terminal Dredge Material Management Plan Dredge Schedule

Salina Caroli	Neatline Quant	tity of Material	Placement Area	Area	Exist Site Elevation	Soil Lift	Consolidated Site Elevation	Levee Length	Exist Levee Elevation	Final Levee Elevation	Neatline Quant (Pum		Percent Complete	Remark
Dredge Area	Capital	Maintenance		(acres)	(MLT)	(fh)	(MLT)	(fic)	(MLT)	(MLT)	Capital	Maintenance	(%)	nemer
at the same and a second	A INC. S. ASSAULT	2.65 (2.55) 25		an an servera	e (150/350) (Par VISO	311000.1801.001.11	garanna kalanas			Shassonia stra		0.09,35.35		
Berthing Area (-45)	2,800,000	200,000				***************************************							4	
		<u> </u>	Developed Areas	<u> </u>		<u> </u>								
		ļ	Shoal Point Phase II Fill	118	11.4	5.9	16.0				870,000	222.222	100%	Leveling C
 	<u> </u>		Shoal Point Phase III Fill Access Corridor	144	10.4	4.2	13.4	4.835			520,000	200,000	53% 34%	
			Acces Corridor					4,835		,	170,000		34%	
			Beneficial Use Sites (BUS)											
			Shoal Point BUS 1 - Levees					13,350	-7.4	8.0	840,000		100%	Levee Co
<u> </u>				ļ		ļ			o to Victoria I tradicional and the Victoria Code and the	Notice that the state of the st				
1		CONTRACTOR OF THE PARTY OF THE	Swan Lake - Mitigation Site + TNRCC Rest.	363	-0.9	0.9	-0.1	entra en			400,000		21%	
along the contraction of the best of a best of the contraction of the	san incrawini resum meerini				<u> </u>									
Maint Dredging Port of Texas City	-	2,340,000 108,000			<u> </u>	-	1						l	
Port of Texas City		108,000	Placement Areas (PA)	ļ						***************************************			ł	
			Shoal Pont PA 5 - Levees	-	 	 		8,900	7.3	8.9		108,000	7%	
		İ	STORE 1 OFF TEL D - DEVEES					5,300		0.3		100,000	l	, dans 1
	-	<u> </u>	Texas City Dike Beach Nourishment	İ		t						1,170,000		***************************************
			l conde on, principal control of the		·									
		1	Beneficial Use Sites (BUS)		1	1						***************************************		amons is entirell to constitute
			Shoal Point BUS 1 - Site	357	-7.2	3.0	-5.5					1,170,000	18%	,
(\$1.86) (\$2.05) (\$1.05) (\$1.05) (\$1.05)	# 190 FE 190 FE	100018410000	and the organization of the property of the property of the control of the contro	ON THE ASSOCIATION	angas ramako kitan		ค่องรับ (ค่องการรับ)	8649,4864,654	naga sanga da	(S. 168 (Burkle)	ana ka Garani da k	dichida disa Assi		AND PROPERTY.
Berthing Area	2,720,000	380,000												
Turning Basin	700,000													
Texas City Channel	600,000	3,360,000												1
Port of Texas City		72,000	Shoal Pont PA 5 - Leves				ļ	8,900	8.9	10.0	¥ .	72,000	12%	
<u> </u>		ļ	1	ļ	ļ	ļ								
4			Texas City Dike Beach Nourishment	ļ	-	 						780,000		-
		1	*	1	1		1	i .			1	, , , , , , , , , , , , , , , , , , , ,	4 /	
		\$		£	{·	·}								Lancarranananan
			Beneficial Use Sites (BUS)				-					The same of the sa	4.0.64	
			Shoal Point BUS 2 - Levees					6,950	-8.0	8.0	465,000		100%	
		HANDER THE PROPERTY OF THE PRO		A Valoritaria de la Constanta				6,950 5,750	-8.0 -2.3	8.0	465,000 185,000		100% 101%	
			Shoal Point BUS 2 - Levees Pelican Island - Levees	262	0.2	22	20				185,000		101%	Levee Co
			Shoal Point BUS 2 - Levees Pelican Island - Levees Swan Lake - Site	363	-0.1	3.3	2.8				185,000 1,475,000		101%	Levee Co
			Shoal Point BUS 2 - Levees Pelican Island - Levees Swan Lake - Site Shoal Point BUS 1 - Site	357	-5.5	10.0	1.2				185,000 1,475,000 1,695,000	2,376,000	101% 100% 86%	Levee Co. Decom.
	TO WOOD SERVICION OF THE PROPERTY OF THE PROPE		Shoal Point BUS 2 - Levees Pelican Island - Levees Swan Lake - Site								185,000 1,475,000		101% 100% 86%	Levee Co Decom
Maint Dredging		2,340,000	Shoal Point BUS 2 - Levees Pelican Island - Levees Swan Lake - Site Shoal Point BUS 1 - Site Pelican Island BUS - Site	357	-5.5	10.0	1.2				185,000 1,475,000 1,695,000	2,376,000	101% 100% 86%	Levee Co. Decom.
Maint. Dredging			Shoal Point BUS 2 - Levees Pelican Island - Levees Swan Lake - Site Shoal Point BUS 1 - Site Pelican Island BUS - Site	357	-5.5	10.0	1.2				185,000 1,475,000 1,695,000	2,376,000	101% 100% 86%	Levee Con Decom
Maint Dredging			Shoal Point BUS 2 - Levees Pelican Island - Levees Swan Lake - Site Shoal Point BUS 1 - Site Pelican Island BUS - Site	357	-5.5	10.0	1.2				185,000 1,475,000 1,695,000	2,376,000	101% 100% 86%	Levee Con Decom
Maint. Dredging			Shoal Point BUS 2 - Levees Pelican Island - Levees Swan Lake - Site Shoal Point BUS 1 - Site Pelican Island BUS - Site Developed Areas	357	-5.5	10.0	1.2				185,000 1,475,000 1,695,000	2,376,000	101% 100% 86%	Levee Con Decom
Maint Dredging			Shoal Point BUS 2 - Levees Pelican Island - Levees Swan Lake - Site Shoal Point BUS 1 - Site Pelican Island BUS - Site Developed Areas Placement Areas (PA)	357	-5.5	10.0	1.2	5,750	-2.5	8.1	185,000 1,475,000 1,695,000 200,000	2,370,000 640,000	101% 100% 86% 100%	Levee Co. Decom.
Maint. Dredging			Shoal Point BUS 2 - Levees Pelican Island - Levees Swan Lake - Site Shoal Point BUS 1 - Site Pelican Island BUS - Site Developed Areas Placement Areas (PA)	357	-5.5	10.0	1.2	5,750	-2.5	8.1	185,000 1,475,000 1,695,000 200,000	2,370,000 640,000	101% 100% 86% 100%	Levee Con Decom
Maint. Dredging			Shoal Point BUS 2 - Levees Pelican Island - Levees Swan Lake - Site Shoal Point BUS 1 - Site Pelican Island BUS - Site Developed Areas Placement Areas (PA) Shoal Pont PA 5 - Levees Texas City Dike Beach Nourishment	357	-5.5	10.0	1.2	5,750	-2.5	8.1	185,000 1,475,000 1,695,000 200,000	2,370,000 640,000 108,000	101% 100% 86% 100%	Levee Con Decom
Maint Dredging			Shoal Point BUS 2 - Levees Pelican Island - Levees Swan Lake - Site Shoal Point BUS 1 - Site Pelican Island BUS - Site Developed Areas Placement Areas (PA) Shoal Pont PA 5 - Levees Texas City Dike Beach Nourishment Beneficial Use Sites (BUS)	357 39	5.5	10.0	1.2	5,750	-2.5	8.1	185,000 1,475,000 1,695,000 200,000	2,370,000 640,000 108,000	101% 100% 86% 100%	Levee Con Decom
Maint Dredging			Shoal Point BUS 2 - Levees Pelican Island - Levees Swan Lake - Site Shoal Point BUS 1 - Site Pelican Island BUS - Site Developed Areas Placement Areas (PA) Shoal Pont PA 5 - Levees Texas City Dike Beach Nourishment	357	-5.5	10.0	1.2	5,750	-2.5	8.1	185,000 1,475,000 1,695,000 200,000	2,370,000 640,000 108,000	101% 100% 86% 100% 119%	Levee Con Levee Con Decom Decom

	Neatline Quan	tity of Material		Area	Exist Site	Soil Lift	Consolidated	Leves Length	Exist Levee	Final Levee	Neatline Quan (Pui	tity of Material oped)	Percent	
ar Dredge Area	Capital	Maintenance	Placement Area	(acres)	Elevation (MLT)	(ft)	Site Elevation (MLT)	(ft)	Elevation (MLT)	Elevation (MLT)	Capital	Maintenance	Complete (%)	Remarks
				Edhar ea	1,46 El SI 16	raz reculturani	0.66186180 <u>18</u> 1			is considerate				
Maint. Dredging		2,340,000 108,000					ļ							
Port of Texas City		108,000	Placement Areas (PA)			1	-				<u> </u>			
			Shoal Pont PA 5 - Levees		-			8,900	11.6	13.1	-	100,000	25%	

			Shoul Point PA 5 - Site	90	7.0	2.1	7.6					108,000	3%	
		API II DIRAMANARI VITARII VITA	Texas City Dike Beach Nourishment									1,170,000		
"			Beneficial Use Sites (BUS)							-				
			Shoal Point BUS 2 - Site	115	-6.8	8.7	-1.8	1		1		1,070,000	59%	
	0.000			Samuel misrorie so	in rajo hali bila		na samue		0 35 02 8 SEE 65.	Elessi silvetari		unio destite della	51 (\$4.16) (60,00)	SUNTAN STUSS ON
Berthing Area	2,435,000	165,000			1	ļ					<u> </u>			<u> </u>
			Beneficial Use Sites (BUS) Shoul Point BUS 3 - Levess	1				0.000		 		-		
) ————			Shoal Point BUS 3 - Levess Shoal Point BUS 4 - Levess					6,650 9,250	-7.5 -8.0	8.0	425,000 620,000	-	101%	Levee Comple Levee Comple
	***************************************		Shoal Point BUS 5 - Levees	1				7,450	9.0	8.0	555,000		100%	Levee Comple
k al			Shoal Point BUS 2 - Site	115	-1.8	5.5	2.5				665,000	110,000	100%	Decom BU
		100000000000000000000000000000000000000	Shoal Point BUS 3 - Site	138	-7.3	1.4	-6.3			region conscion version	170,000	55,000	10%	
Maint. Dredging	<u> </u>	2,840,000		T		T The state of the	T		l e e	Tanan Pasa	11221350335035030 T			T
Port of Texas City		108,000	***************************************	İ	1	t				1				T
KENSH			Placement Areas (PA)											
			Shoal Pont PA 5 - Levees	ļ				8,900	13.1	14.6		108,000	32%	
			Texas City Dike Beach Nourishment	 		<u> </u>		ļ			ļ	1.450.000		
			Texas City Dike Beach Nourishment	 	 	ł		 				1,170,000		
			Beneficial Use Sites (BUS)				1					†		
			Shoal Point BUS 3 - Site	138	-6.3	7.9	-1.7					1,170,000	57%	
	records the discussion	girtris in refarming recorded at alminet		,										
Maint. Dredging		2,340,000			-	1				1				
Port of Texas City		108,000	Piscement Areas (PA)	ļ		ļ	ļ				· ·		<u> </u>	-
]			Shoul Pont PA 5 - Levees	ł	1		1	8,900	14.6	16.2	-	108,000	39%	
					THE PROPERTY OF THE PARTY OF TH	1		4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4				120,000	-	
			Shoal Point PA 5 - Site	90	7.6	0.5	7.9					45,000	5%	
•			Texas City Dike Beach Nourishment	<u> </u>	<u> </u>	ļ						1,170,000		
			rexas City Dixe Beach Nourishment	ļ		 	 	 			<u> </u>	1,170,000		
			Beneficial Use Sites (BUS)											
			Shoul Point BUS 3 - Site	138	-1.7	7.6	2.6			orenween conventor		1,125,000	101%	Decom. BU
Maint. Dredging	4889148919484184848494	2,340,000	1			T	1		I	1		7		1
555000		108,000				İ	 	 						
Port of Texas City	***************************************		Placement Areas (PA)	T	1	!	1				1	1		1
)			Shoal Pant PA 5 - Levees					8,900	16.2	17.8		108,000	46%	
.			317333.131.133.133.133.133.133.133.133.1	1	1									
1678 N			Texas City Dike Beach Nourishment	1	ļ	 		ļ	ļ	 	-	1,170,000		ļ
*			Beneficial Use Sites (BUS)	1		 	ļ		 	 	1			-
	-		Shoal Point BUS 4 - Site	138	-8.0	7.9	-2.8	1				1,170,000	50%	1
COLOR	สระเกิดสมายสมาชาน			1	SECTION AND REPORT OF THE PROPERTY OF THE PARTY i				1777	de esperante de la companie de la companie de la companie de la companie de la companie de la companie de la c	1,170,000	والمساورة والمساورة المعاشدة والمساورة والمراجعة		

	Neatline Qua	ntity of Material	### # # : : : ^ ^ ^	Area	Exist Site	Soil Lift	Consolidated	Leves Length	Exist Levee	Final Levee	Neatline Quar (Pu	ntity of Material mped)	Percent	
Dredge Area	Capital	Maintenance	Placement Area	(acres)	Elevation (MLT)	(ft)	Site Elevation (MLT)	(ft)	Elevation (MLT)	Elevation (MLT)	Capital	Maintenance	Complete (%)	Remark
			N N N N N N N N N N N N N N N N N N N	0.160(6),650		12 (21) (21)	10.65.8.65	30 May 28 J 18 J 18		e de la la la la la la la la la la la la la				
Maint. Dredging Port of Texas City		2,340,000						***************************************		***************************************			A-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1	
FOR OF TEXAS CITY		100,000	Placement Areas (PA)		1	<u> </u>	1		1					
			Shoal Pont PA 5 - Levges					8,900	17.8	19.4	-	108,000	53%	
ļ					ļ	ļ						1		ļ
***************************************			Texas City Dike Beach Nourishment									1,170,000		
			Beneficial Use Sites (BUS)							!				
			Shoal Point BUS 4 - Site	138	-2.8	7.9	2.4					1,170,000	99%	Decom
			1	15 (21) (30 (10 A)		<u>(2000-23) (200</u>					DESCRIPTION OF THE PROPERTY OF		9.36.06.22.69	
Maint. Dredging		2,340,000			-}	<u> </u>			 	<u> </u>				
Port of Texas City		108,000	Placement Areas (PA)											
		1	Shoal Point PA 5 - Site	90	7.9	1.1	8.5			1		108,000	8%	
			The state of the s	Total Control					1					
			Texas City Dike Beach Nourishment			ļ	ļ	ļ	ļ			1,170,000	ļ	
		1	Beneficial Use Sites (BUS)						ļ					
decimal and the second		/AL BOSTONIA (VIII)	Shoal Point BUS 5 - Site	161	-3.9	6.8	-5.1	1		<u> </u>		1,170,000	34%	
Maint. Dredging		2,340,000				ļ	ļ	ļ	ļ	ļ	ļ	1	J	
Port of Texas City	-	108,000	Placement Areas (PA)			<u> </u>			ļ				***************************************	ļ
			Shoal Point PA 5 - Site	90	8.5	1.1	9.1		1	!	-	108,000	11%	
andels his hadron to consider the colorine that the colorine transfer the consecutivity and					1	1	1		1	***************************************				
			Texas City Dike Beach Nourishment									1,170,000		
	_		Beneficial Use Sites (BUS)	ļ	- 	<u> </u>	ļ		ļ	ļ		-		1
	-	 	Shoal Point BUS 5 - Site	161	-5.1	6.8	-1.2		ļ			1,170,000	68%	
					the second in the second							, 1,1,0,000	•	
Maint. Bredging		2,340,000										- Annual Control of the Control of t		- Constitution of the Cons
Port of Texas City		108,000	Placement Areas (PA)		-	ļ	 	ļ	 					
	1	-	Placement Areas (PA) Shoal Point PA 5 - Site	90	9.1	1.8	10.1		 		ļ	178,000	16%	-
		ni waja	TOTAL TOTAL TOTAL CONTROL	30	3.1	4.0	101				<u> </u>	110,000	40.10	<u> </u>
			Texas City Dike Beach Nourishment				L,					1,170,000		
				-				ļ		ļ				
		-	Beneficial Use Sites (BUS) Shoal Point BUS 5 - Site	161	-1.2	6.4	2.5	<u> </u>	-	_		1,100,000	100%	Decom.
0.0000000000000000000000000000000000000		STATE OF THE STATE OF	ponous turit BUS 3 - Still	1 101	toviti.	i os Estas altrassas	1 4.0		La constante	Alica Navida estas		1,100,000	II 100%	Lecom.
Maint. Dredging	manu an arak area outrook of Cal-East Oct at Cal-East	2,340,000				**************************************	and the second s	man emergraphic characteristic c		on see on cuseon old all following folds	Armini wasanasi na kata	na panisis to anau dalesco sansisti U	CASCIPATION OF THE PROPERTY OF	
Port of Texas City		108,000							<u> </u>					
ł		-	Piacement Areas (PA) Shoul Point PA 6 - Levees	ļ	 	ļ	ļ	13,500	7.2	10.0	1 1	1,100,000	470	-
			CONGGS FORM FA 0 - LEVEES	 	+	<u> </u>	 	13,500	7.3	18.0	-	1,100,000	47%	
			Shoal Point PA 5 - Site	90	10.1	1.8	11.1		1			178,000	22%	
		1	Texas City Dike Beach Nourishment	9/31/9/0 D02/37/00		Server extensions			1	10000000000000000000000000000000000000	OFFICE OFFICE AND A STREET	1,170,000		
Maint. Dredging	<u> </u>	2,340,000		200452025000000000000000000000000000000	<u> </u>	лукцеровратіні 	18 (18)000000000000000000000000000000000000		ewseusesteithist 	a separted on the State (State	l T	2007207515556		
Port of Texas City		108,000				t	<u> </u>	 	t	1		1	!	
į			Placement Areas (PA)											
1			Shoal Point PA 6 - Levees					13,500	18.0	28.6		1,100,000	94%	
				1	1	ţ	į	1	}	1	1	1	1	}
		- 	Charl Brist DA E Cita	00	171	10	7.0. 7		1	Ţ	1	170 000	actor	1
VA 11-000000 Miles of the Administration of		-	Shoal Point PA 5 - Site	90	11.1	1.8	12.1	}			-	178,000	27%	

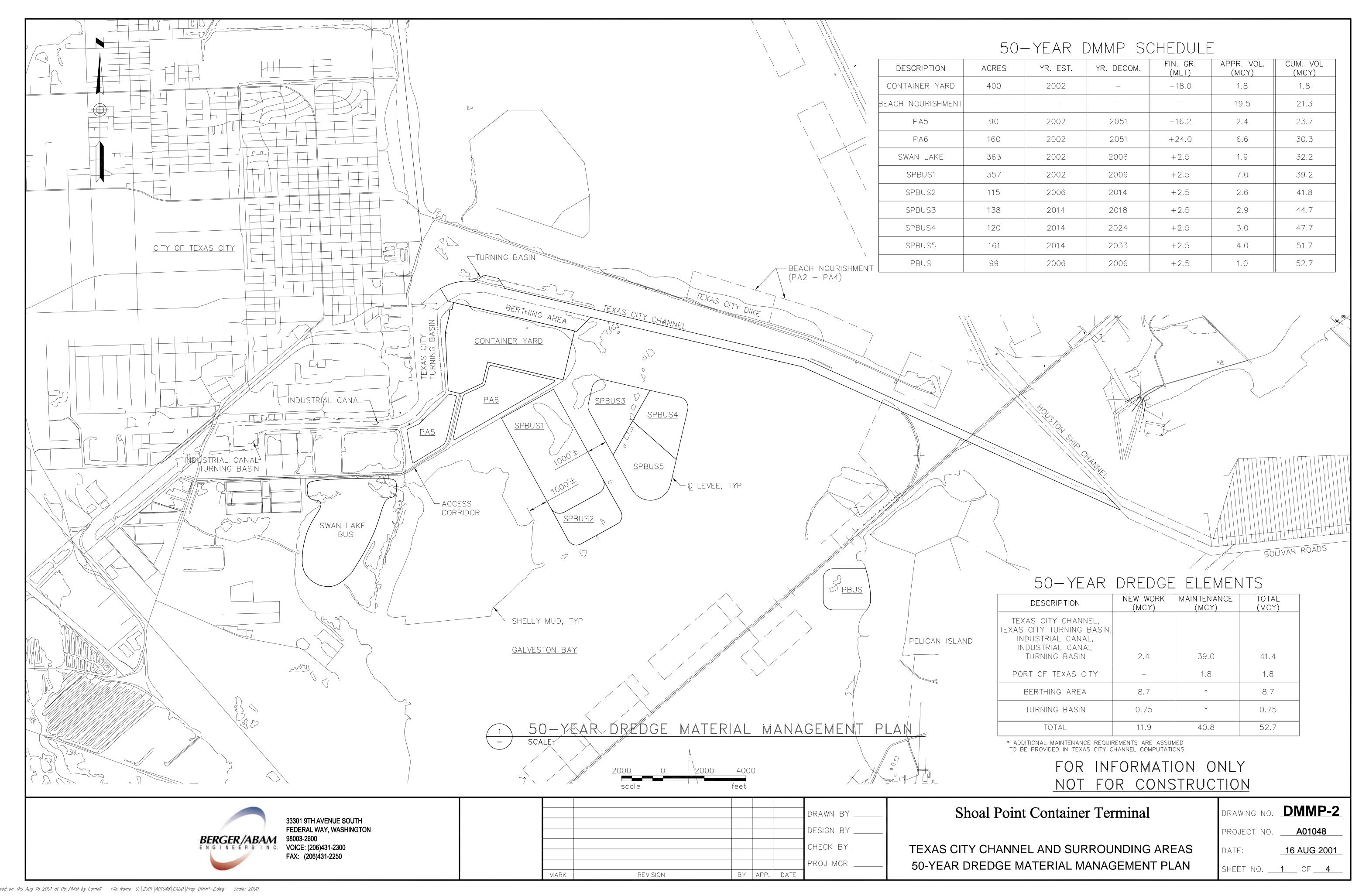
r	Dredge Area	Neatline Quantity of M	iaterial Piacement Area	Area	Exist Site Elevation	Sail Lift	Consolidated Site Elevation	Levee Length	Exist Levee Elevation	Final Leves Elevation		ntity of Material mped)	Percent Complete	Remarks
	Dreuge Area	Capital Mainte	사람이 사람들이 되었다. 이 사람들은 사람들은 사람들이 가장 하는 사람들이 되었다. 그는 사람들이 살아 없는 사람들이 되었다.	(acres)	(MLT)	(ft)	(MLT)	(ft)	(MLT)	(MLT)	Capital	Maintenance	(%)	i deniara
	2. Can Se Casa (2. Can Cas Se)	la leo de la compania de		5 24 50 20 25 3	6 95 St. 60 St.			454 AFRASS MARS	u sa un sécuin	69160168760		0.000.000.000.000	ercentoure (C.)	akalinanan
1	Maint. Dredging	2,	340,000											
	Port of Texas City		108,000				1							
M.			Placement Areas (PA)				<u> </u>			!	İ			
1			Shoal Point PA 5 - Site	90	12.1	1.8	13.1		ļ		-	178,000	32%	
1			Shoal Point PA 6 - Site	165	8.8	6.2	12.2					1,100,000	20%	promission not reconstituted.
Ŋ-			Texas City Dike Beach Nourishment				·		W	***************************************	********************************	1,170,000		,
		en començativa												
1	Maint. Dredging	2,	340,000				1				ŀ			
1	Port of Texas City		108,000									1 11		
			Placement Areas (PA)											Į.
			Shoal Point PA 5 - Site	90	13.1	1.8	14.1				-	178,000	37%	b
1			Shoal Point PA 6 - Site	165	12.2	6.2	15.6				-	1,100,000	40%	
								1						
11			Texas City Dike Beach Nourishment	1			1			1	1	1,170,000		L
110	<u> </u>		The second secon											
	Maint, Dredging		,340,000				1	Ĺ			<u> </u>			
P	Port of Texas City		108,000					1			<u> </u>		ļ	
4			Placement Areas (PA)								ļ			j
4			Shoal Pont PA 5 - Levees		1		-	8,900	19.4	22.0		178,000	65%	
1			Shoul Point PA 6 - Levees		1		-	13,500	28.6	30.2	ļ	165,000	101%	Levee Co
*			Shoal Point PA 6 - Site	165	15.6	5.3	18.5				 	935.000	56%	J
			Texas City Dike Beach Nourishment	Day of a major de la constant de	2750100000000000000000000000000000000000	TENTION FROM A TENTION		C 451045450000-4-44T0501-70		ASSESSED AND RELIGIOUS	-	1,170,000		Service services and a
				<u> </u>	<u> </u>	T	<u>57,550,552,653,655</u> T		T	<u> </u>	T		1	
	Maint. Dredging		340,000				·					***		
u P	Port of Texas City		Placement Areas (PA)				+	d	 	}	ļ	+		í
#	**************************************	~~~	Shoal Pont PA 5 - Levees					8,900	22.0	24.7	ł	178,000	76%)
			MANAGE FORE FALS - LEVERS	1			+	0,300	22.0	24.1	-	110,000	10%	j
			Shoal Point PA 6 · Site	165	18.5	6.2	21.9				-	1,100,000	76%	
1					_		<u> </u>		ļ	<u> </u>	ļ	4.550		ļ
			Texas City Dike Beach Nourishment			1	1	1	1	<u> </u>	1	1,170,000	1	A

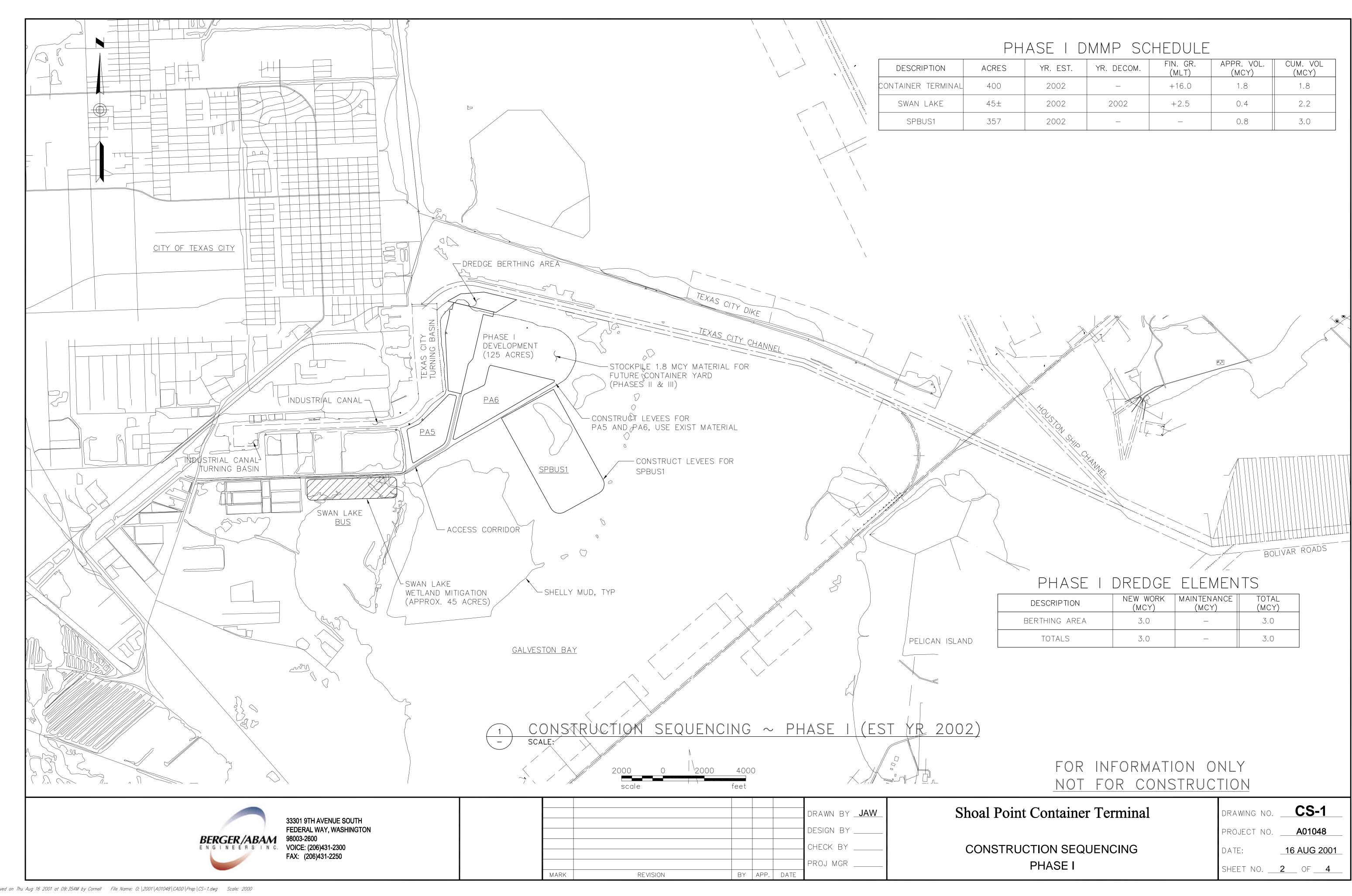
Shoal Point Container Terminal Dredge Material Management Plan Dredge Assumptions

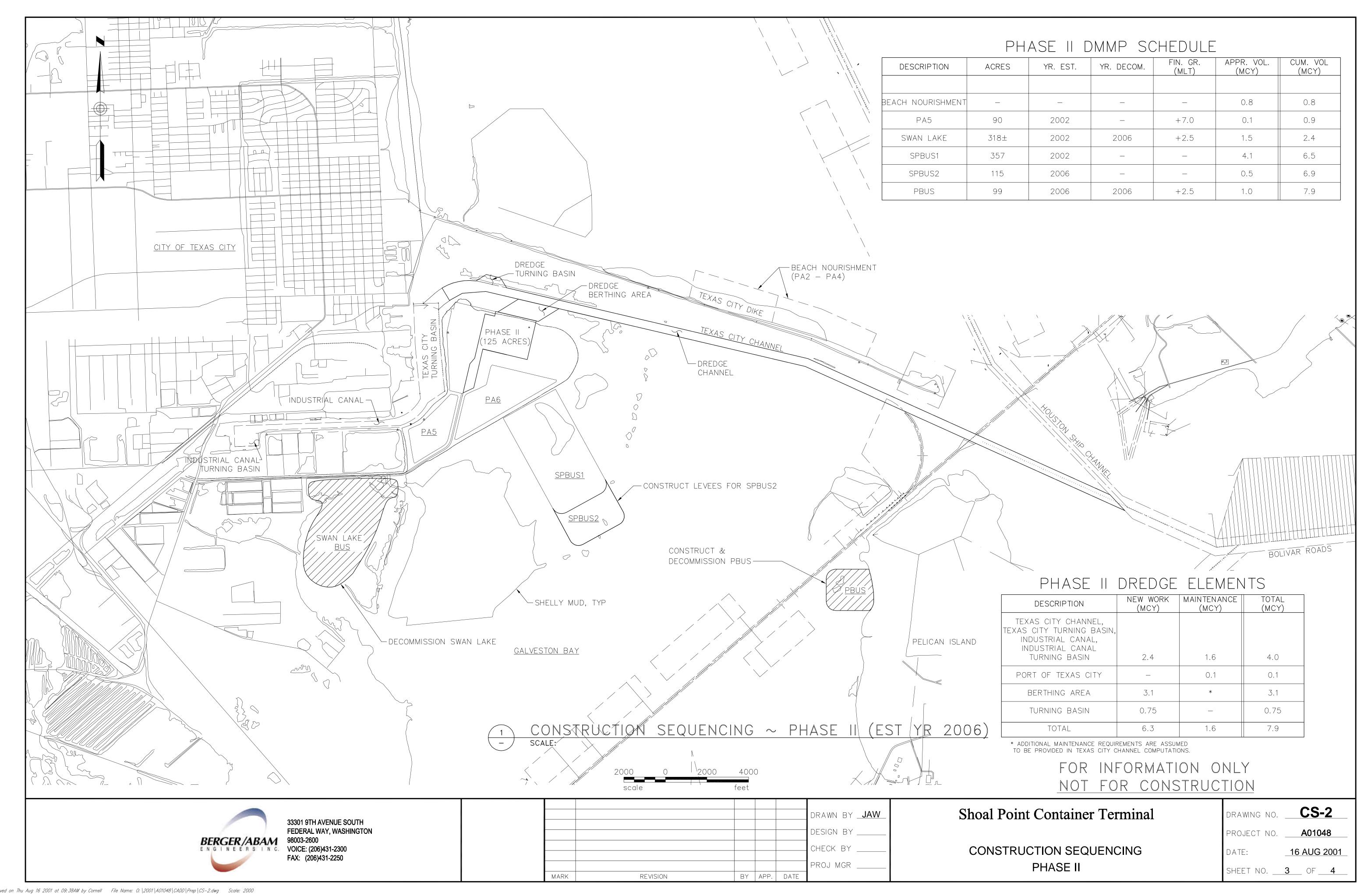
Site Geotechnical Characterist	ies
Capital Grade Bulking Factor	1.30
Capital Grade Consolidation Factor	1.10
Maintenance Grade Bulking Factor	1.50
Maintenance Grade Consolidation Factor	0.90
Capital Grade Slurry Content (X)	1.10
Maintenance Grade Slurry Content (X)	1.40

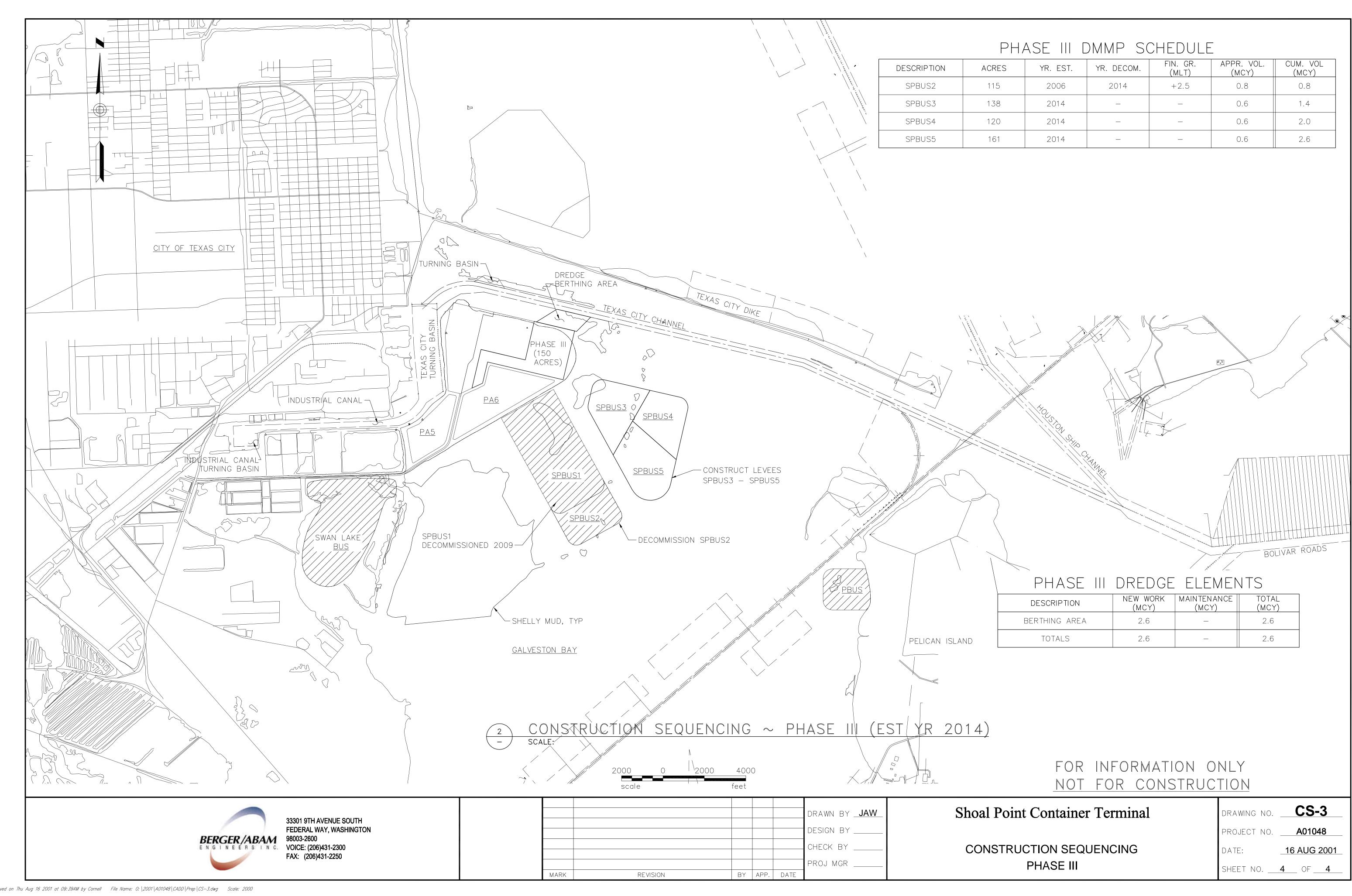
Levee Geotechnical Characte	ristics
Capital Grade Bulking Factor	1.05
Capital Grade Consolidation Factor	1.05
Maintenance Grade Bulking Factor	1.50
Maintenance Grade Consolidation Factor	0.50

Appendix G - Phased Element Drawings









APPENDIX C

SUPPORTING INFORMATION FOR TRAFFIC ANALYSIS, SHOAL POINT CONTAINER TERMINAL

APPENDIX C-1 24-HOUR TRAFFIC COUNT DATA

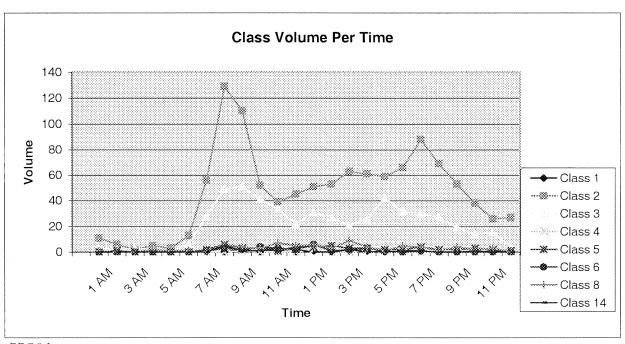
24-HOUR SOUTH BOUND TRAFFIC VOLUME COUNT IH-45 FRONTAGE ROAD

TEXAS CITY, TEXAS

24-Hour	Traffic	Volume	Count on	March	23	2001

Time Start	Class 1	Class 2	Class 3	Class 4	Class 5	Class 6	Class 8	Class 14	Total Count Per Hour
12 AM	0	11	3	0	0	0	1	0	15
1 AM	0	6	2	0	1	0	0	0	9
2 AM	0	2	2 3	0	0	0	0	0	5
3 AM	0	5	2	0	0	0	2	0	9
4 AM	0	3	1	0	0	0	1	0	5
5 AM	0	13	6	0	0	0	1	0	20
6 AM	0	56	28	0	2	1	0	0	87
7 AM	0	129	49	0	6	3	6	5	198
8 AM	2	110	51	1	3	2	4	1	174
9 AM	0	52	41	0	3	4	3	1	104
10 AM	1	39	34	0	1	3	7	3	88
11 AM	0	45	22	0	4	2	5	2	80
12 PM	1	51	31	2	4	6	6	0	101
1 PM	0	53	27	0	5	1	3	0	89
2 PM	1	63	21	0	3	2	9	2	101
3 PM	1	61	26	1	3	3	4	0	99
4 PM	0	59	42	1	2	1	1	1	107
5 PM	1	66	32	0	2	0	5	0	106
6 PM	1	88	30	0	4	1	4	1	129
7 PM	0	69	27	0	2	0	1	0	99
8 PM	0	53	19	0	2	0	4	0	78
9 PM	0	38	14	0	3	0	2	1	58
10 PM	1	26	15	- 0	2	0	3	0	47
11 PM	0	27	4	0	1	0	0	0	32
Total	9	1125	530	5	53	29	72	17	1840
Percent	0.49%	61.14%	28.80%	0.27%	2.88%	1.58%	3.91%	0.92%	100%

24-Hour Traffic Volume is 1840 Vehicles
Peak Hour Consists of 198 Vehicles Beginning at 7:00 A.M.
South Bound Traffic Volume Contains 10% Trucks



24-HOUR NORTH BOUND TRAFFIC VOLUME COUNT LOOP 197

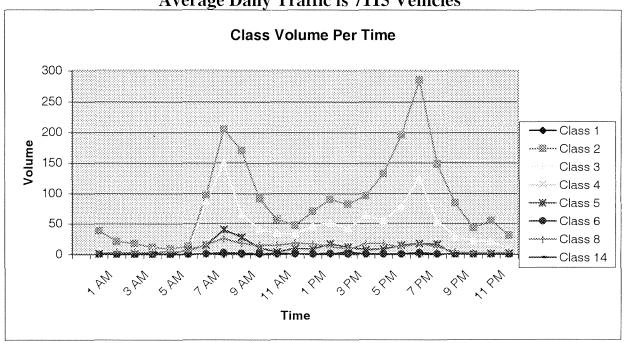
TEXAS CITY, TEXAS

24-Hour Traffic Volume Count on January 9, 2001

Time Start	Class 1	Class 2	Class 3	Class 4	Class 5	Class 6	Class 8	Class 14	Total Count Per Hour
12 AM	0	38	6	0	1	0	2	1	48
1 AM	0	21	0	0	0	0	3	0	24
2 AM	0	17	2	0	1	0	3	0	23
3 AM	0	11	6	0	0	0	3	2	22
4 AM	0	9	5	0	1	0	5	0	20
5 AM	0	13	6	0	8	0	6	0	33
6 AM	1	97	86	1	15	1	16	1	218
7 AM	0	205	149	0	41	3	26	0	424
8 AM	0	170	66	1	28	2	18	2	287
9 AM	0	92	41	3	11	1	15	0	163
10 AM	0	57	34	1	4	2	14	1	113
11 AM	1	47	33	2	10	1	19	1	114
12 PM	0	70	46	1	9	1	17	0	144
1 PM	1	90	52	2	17	2	13	0	177
2 PM	0	82	42	1	12	1	9	5	152
3 PM	0	96	63	0	8	1	17	0	185
4 PM	0	132	56	2	9	1	17	0	217
5 PM	0	196	78	0	15	1	12	1	303
6 PM	0	285	125	1	17	3	17	2	450
7 PM	0	148	54	1	16	1	12	0	232
8 PM	1	84	29	0	0	0	4	1	119
9 PM	0	43	22	0	0	0	2	0	67
10 PM	0	55	21	0	1	0	2	0	79
11 PM	0	31	9	0	2	0	3	0	45
Total	4	2089	1031	16	226	21	255	17	3659
Percent	0.11%	57.09%	28.18%	0.44%	6.18%	0.57%	6.97%	0.46%	100%

24-Hour North Bound Traffic Volume is 3659 Vehicles Peak Hour Consists of 450 Vehicles Beginning at 6:00 P.M. North Bound Traffic Volume Contains 15% Trucks

Average Daily Traffic is 7115 Vehicles



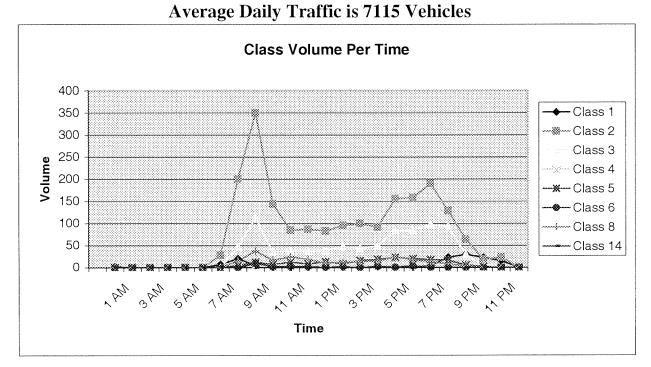
24-HOUR SOUTH BOUND TRAFFIC VOLUME COUNT LOOP 197

TEXAS CITY, TEXAS

24-Hour Traffic Volume Count on Januar	rv 9	on Januar	2001
--	------	-----------	------

Time Start	Class 1	Class 2	Class 3	Class 4	Class 5	Class 6	Class 8	Class 14	Total Count Per Hour
12 AM	2	0	0	0	0	0	0	0	2
1 AM	0	0	0	0	ō	0	ő	0	0
2 AM	0	0	0	0	$\stackrel{\circ}{o}$	0	0	1	1
3 AM	Ö	ő	ő	0	0	ő	ő	0	$ar{0}$
4 AM	0	0	0	0	Ö	0	Ö	0	0
5 AM	0	0	0	0	$\overset{\circ}{o}$	0	ő	ő	0
6 AM	7	28	0	0	0	0	0	1	36
7 AM	20	200	47	ő	5	0	15	0	287
8 AM	5	350	114	5	12	10	38	0	534
9 AM	0	144	35	0	7	2	17	$\begin{bmatrix} & & & & & & & & & & & & & & & & & & &$	206
10 AM	0	85	39	1	12	3	25	0	165
11 AM	1	87	38	1	9	2	19	ő	157
12 PM	0	83	39	2	13	1	10	0	148
1 PM	0	96	48	1	9	2	12	0	168
2 PM	0	99	43	0	16	0	14	1	173
3 PM	2	92	49	3	19	3	15	0	183
4 PM	0	156	84	0	23	1	24	1	289
5 PM	0	158	85	ő	20	4	18	0	285
6 PM	5	190	97	3	18	0	13	0	326
7 PM	23	128	93	0	17	0	9	1	271
8 PM	30	64	30	0	6	0	3	0	133
9 PM	23	19	4	0	2	0	1	1	50
10 PM	15	23	1	1	\overline{o}	0	1	0	41
11 PM	1	0	0	0	$\overset{\circ}{o}$	0	0	0	1
Total	134	2002	846	17	188	28	234	7	3456
Percent	3.88%	57.93%	24.48%	0.49%	5.44%	0.81%	6.77%	0.20%	100%

24-Hour South Bound Traffic Volume is 3456 Vehicles
Peak Hour Consists of 534 Vehicles Beginning at 8:00 A.M.
South Bound Traffic Volume Contains 14% Trucks

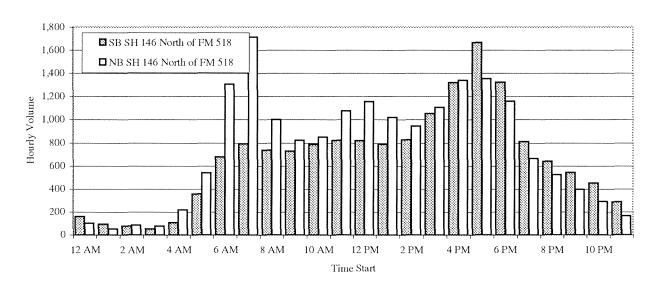


SH 146 NORTH OF FM 518

24-Hour Traffic Volume Count on August 17, 2000

Time		SB SH 14	6 North o	of FM 518	3		NB SH 14	46 North	of FM 51	3					
Start	0:00	0:15	0:30	0:45	Total	0:00	0:15	0:30	0:45	Total					
12 AM	161	0	0	0	161	102	0	0	0	102					
1 AM	94	0	0	0	94	53	0	0	0	53					
2 AM	79	0	0	0	<i>7</i> 9	85	0	0	0	85					
3 AM	54	0	0	0	54	78	0	0	0	78					
4 AM	107	0	0	0	107	219	0	0	0	219					
5 AM	357	0	0	0	357	542	0	0	0	542					
6 AM	680	0	0	0	680	1,307	0	0	0	1,307					
7 AM	793	0	0	0	<i>793</i>	1,713	0	0	0	1,713					
8 AM	738	0	0	0	738	1,001	0	0	0	1,001					
9 AM	729	0	0	0	729	823	0	0	0	823					
10 AM	787	0	0	0	<i>787</i>	851	0	0	0	851					
11 AM	823	0	0	0	823	1,076	0	0	0	1,076					
12 PM	820	0	0	0	820	1,156	0	0	0	1,156					
1 PM	790	0	0	0	790	1,022	0	0	0	1,022					
2 PM	828	0	0	0	828	945	0	0	0	945					
3 PM	1,053	0	0	0	1,053	1,106	0	0	0	1,106					
4 PM	1,321	0	0	0	1,321	1,340	0	0	0	1,340					
5 PM	1,666	0	0	0	1,666	1,353	0	0	0	1,353					
6 PM	1,324	0	0	0	1,324	1,159	0	0	0	1,159					
7 PM	812	0	0	0	812	665	0	0	0	665					
8 PM	640	0	0	0	640	524	0	0	0	524					
9 PM	544	0	0	0	544	396	0	0	0	396					
10 PM	452	0	0	0	452	290	0	0	0	290					
11 PM	288	0	0	0	288	166	0	0	0 166						
Total	24-1	Hour Voli	ıme of 15,	940 Vehi	cles	24-1	Hour Voli	ıme of 17,	972 Vehi	cles					
Peak	Peal	k Hour co	nsists of I	1,666 vehi	icles	Peak	k Hour co	nsists of I	1,713 vehi	cles					
Hour			ing at 5:0					ing at 7:0							

24-Hour Bi-Directional Traffic Volume = 33,912 Vehicles

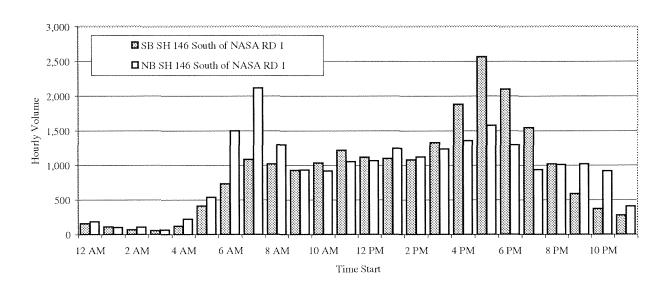


SH 146 SOUTH OF NASA ROAD 1

24-Hour Traffic Volume Count on August 17, 2000

Time	SB	SH 146	South of I	NASA RI) 1	NE	3 SH 146	South of	NASA R	D 1
Start	0:00	0:15	0:30	0:45	Total	0:00	0:15	0:30	0:45	Total
12 AM	155	0	0	0	155	186	0	0	0	186
1 AM	113	0	0	0	113	100	0	0	0	100
2 AM	68	0	0	0	68	108	0	0	0	108
3 AM	56	0	0	0	56	63	0	0	0	63
4 AM	121	0	0	0	121	222	0	0	0	222
5 AM	410	0	0	0	410	534	0	0	0	534
6 AM	731	0	0	0	731	1,497	0	0	0	1,497
7 AM	1,083	0	0	0	1,083	2,115	0	0	0	2,115
8 AM	1,017	0	0	0	1,017	1,292	0	0	0	1,292
9 AM	925	0	0	0	925	928	0	0	0	928
10 AM	1,030	0	0	0	1,030	915	0	0	0	915
11 AM	1,216	0	0	0	1,216	1,050	0	0	0	1,050
12 PM	1,113	0	0	0	1,113	1,061	0	0	0	1,061
1 PM	1,097	0	0	0	1,097	1,242	0	0	0	1,242
2 PM	1,077	0	0	0	1,077	1,117	0	0	0	1,117
3 PM	1,327	0	0	0	1,327	1,234	0	0	0	1,234
4 PM	1,881	0	0	0	1,881	1,353	0	0	0	1,353
5 PM	2,566	0	0	0	2,566	1,577	0	0	0	1,577
6 PM	2,099	0	0	0	2,099	1,293	0	0	0	1,293
7 PM	1,542	0	0	0	1,542	933	0	0	0	933
8 PM	1,017	0	0	0	1,017	1,007	0	0	0	1,007
9 PM	588	0	0	0	588	1,017	0	0	0	1,017
10 PM	370	0	0	0	370	913	0	0	0	913
11 PM	279	0	0	0	279	407	0	0	0	407
Total	24-1	<u> Hour Voli</u>	ıme of 21,	881 Vehi	cles	24-1	Hour Voli	ıme of 22,	164 Vehi	cles
Peak	Peak	k Hour co	nsists of 2	2,566 vehi	cles	Peak	Hour co	nsists of 2	2,115 vehi	cles
Hour		beginn	ing at 5:0	00 PM			beginn	ing at 7:0	00 AM	

24-Hour Bi-Directional Traffic Volume = 44,045 Vehicles



APPENDIX C-2 TURNING MOVEMENT COUNTS

TURNING MOVEMENT COUNT

(T.M.C TAKEN AT THE IH-45 AT PORT DR. (EAST SIDE) INTERSECTION)

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
	PEDS	SBR	SBTH	SBL	PEDS	WBR	WBTH	WBL	PEDS	NBR	NBTH	NBL	PEDS	EBR	EBTH	EBL
7:00 A.M.	0	0	0	0	0	15	22	0	0	4	0	29	0	0	31	32
7:15 A.M.	0	0	0	0	0	24	16	1	0	5	1	16	0	0	38	28
7:30 A.M.	0	0	0	0	0	21	14	0	0	10	0	32	0	0	49	32
7:45 A.M.	0	0	0	0	0	21	11	0	0	2	0	26	0	0	53	24
TOTALS	0	0	0	0	0	81	63	1	0	21	1	103	0	0	171	116
		0					145				125				287	

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
	PEDS	SBR	SBTH	SBL	PEDS	WBR	WBTH	WBL	PEDS	NBR	NBTH	NBL	PEDS	EBR	EBTH	EBL
5:00 A.M.	0	0	0	0	0	65	29	0	0	2	1	8	0	0	37	58
5:15 A.M.	0	0	0	0	0	81	43	1	0	3	0	4	0	0	64	70
5:30 A.M.	0	0	0	0	0	100	47	0	0	3	0	7	0	0	55	85
5:45 A.M.	0	0	0	0	0	40	15	0	0	4	1	7	0	0	61	26
TOTALS	0	0	0	0	0	286	134	1	0	12	2	26	0	0	217	239
			0				421				40				456	

TURNING MOVEMENT COUNT

(T.M.C TAKEN AT THE IH-45 AT PORT DR. (WEST SIDE) INTERSECTION)

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
	PEDS	SBR	SBTH	SBL	PEDS	WBR	WBTH	WBL	PEDS	NBR	NBTH	NBL	PEDS	EBR	EBTH	EBL
7:00 A.M.	0	11	0	23	0	0	36	12	0	3	0	1	0	10	36	0
7:15 A.M.	0	9	1	20	0	0	26	7	0	0	0	1	0	3	46	0
7:30 A.M.	0	10	0	24	0	0	34	11	0	0	0	0	0	11	58	1
7:45 A.M.	0	12	0	26	0	1	28	7	0	0	0	0	0	12	53	0
TOTALS	0	42	1	93	0	1	124	37	0	3	0	2	0	36	193	1
	136						162				5				230	

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
	PEDS	SBR	SBTH	SBL	PEDS	WBR	WBTH	WBL	PEDS	NBR	NBTH	NBL	PEDS	EBR	EBTH	EBL
5:00 A.M.	0	34	3	26	0	0	21	10	0	4	0	3	0	35	62	0
5:15 A.M.	0	3	0	40	0	0	35	8	0	0	0	3	0	32	93	0
5:30 A.M.	0	1	1	30	0	0	34	16	0	1	0	0	0	26	107	0
5:45 A.M.	0	10	1	35	0	0	17	5	0	3	0	0	0	11	46	0
TOTALS	0	48	5	131	0	0	107	39	0	8	0	6	0	104	308	0
	184						146	***************************************			14				412	

TMCCOUNT_GALVESTON.xls

TURNING MOVEMENT COUNT

(T.M.C TAKEN AT THE IH-45 AT SH 275 (HARBORSIDE) INTERSECTION)
(EAST ITERSECTION)

							(10/10/	11111	LOTIO	(1)						
TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
	PEDS	SBR	SBTH	SBL	PEDS	WBR	WBTH	WBL	PEDS	NBR	NBTH	NBL	PEDS	EBR	EBTH	EBL
7:00 A.M	0	0	0	0	0	87	9	0	0	5	2	14	0	0	258	2
7:15 A.M	0	0	0	0	0	103	14	0	0	7	0	14	0	0	353	3
7:30 A.M	0	0	0	0	0	64	12	0	0	5	0	20	0	0	416	11
7:45 A.M	0	0	0	0	0	85	16	0	0	19	4	26	0	0	395	10
TOTALS	0	0	0	0	0	339	51	0	0	36	6	74	0	0	1422	26
		0									116				1448	

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
	PEDS	SBR	SBTH	SBL	PEDS	WBR	WBTH	WBL	PEDS	NBR	NBTH	NBL	PEDS	EBR	EBTH	EBL
5:00 A.M	0	0	0	0	0	436	23	0	0	7	4	45	0	0	67	18
5:15 A.M	0	0	0	0	0	398	27	0	0	6	5	48	0	0	85	21
5:30 A.M	0	0	0	0	0	449	22	0	0	9	0	40	0	0	83	10
5:45 A.M	0	0	0	0	0	258	14	0	0	5	0	31	0	0	72	5
TOTALS	0	0	0	0	0	1541	86	0	0	27	9	164	0	0	307	54
			0				1627				200				361	

TURNING MOVEMENT COUNT

(T.M.C TAKEN AT THE IH-45 AT SH 275 (HARBORSIDE) INTERSECTION)
(WEST ITERSECTION)

							(110	11-11	<u> </u>	· · · /						
TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
	PEDS	SBR	SBTH	SBL	PEDS	WBR	WBTH	WBL	PEDS	NBR	NBTH	NBL	PEDS	EBR	EBTH	EBL
7:00 A.M	0	0	4	254	0	0	6	18	0	0	0	0	0	14	5	0
7:15 A.M	0	0	20	339	0	0	7	21	0	0	0	0	0	14	4	0
7:30 A.M	0	1	1	373	0	0	7	22	0	0	0	0	0	23	57	0
7:45 A.M	0	0	1	363	0	1	17	23	0	0	0	0	0	11	60	0
TOTALS	0	1	26	1329	0	1	37	84	0	0	0	0	0	62	126	0
			1356				122				0				188	

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
	PEDS	SBR	SBTH	SBL	PEDS	WBR	WBTH	WBL	PEDS	NBR	NBTH	NBL	PEDS	EBR	EBTH	EBL
5:00 A.M	0	1	6	66	0	0	11	57	0	0	0	0	0	18	15	0
5:15 A.M	0	0	6	85	0	0	25	51	0	0	0	0	0	16	19	0
5:30 A.M	0	1	3	81	0	0	10	51	0	0	0	0	0	18	12	0
5:45 A.M	0	0	4	68	0	0	18	29	0	0	0	0	0	7	9	0
TOTALS	0	2	19	300	0		64	188	0		0	0		59	55	0
IOTALS	0 1		321	300		0	252	100	<u> </u>	<u> </u>	0	U	0	33	114	0

TURNING MOVEMENT COUNT

(T.M.C TAKEN AT THE BROADWAY AT 51 ST STREET INTERSECTION)

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
	PEDS	SBR	SBTH	SBL	PEDS	WBR	WBTH	WBL	PEDS	NBR	NBTH	NBL	PEDS	EBR	EBTH	EBL
7:00 A.M	0	28	14	10	0	11	136	3	0	11	8	10	0	8	394	81
7:15 A.M	0	20	17	12	0	10	186	2	0	13	25	5	0	3	547	107
7:30 A.M	0	44	24	9	0	15	226	11	0	9	40	9	0	7	733	75
7:45 A.M	0	30	37	9	0	35	258	9	0	24	53	14	0	4	724	82
TOTALS	0	122	92	40	0	71	806	25	0	57	126	38	0	22	2398	345
			054				000				004				0705	

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
	PEDS	SBR	SBTH	SBL	PEDS	WBR	WBTH	WBL	PEDS	NBR	NBTH	NBL	PEDS	EBR	EBTH	EBL
5:00 A.M	0	108	40	43	0	17	636	8	0	8	26	21	0	9	315	18
5:15 A.M	0	83	32	22	0	11	571	68	0	5	29	12	0	8	311	26
5:30 A.M	0	84	21	42	0	17	662	3	0	6	24	19	0	5	278	32
5:45 A.M	0	67	30	22	0	13	450	6	0	6	14	0	0	4	302	37
TOTALS	0	342	123	129	0	58	2319	85	0	25	93	52	0	26	1206	113
			594				2462				170				1345	

TURNING MOVEMENT COUNT

(T.M.C TAKEN AT THE SH 275 (HARBORSIDE) AT 51 ST STREET INTERSECTION)

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
	PEDS	SBR	SBTH	SBL	PEDS	WBR	WBTH	WBL	PEDS	NBR	NBTH	NBL	PEDS	EBR	EBTH	EBL
7:00 A.M	0	2	10	5	0	6	60	20	0	58	21	5	0	8	201	5
7:15 A.M	0	1	12	5	0	7	76	28	0	117	25	6	0	3	259	6
7:30 A.M	0	1	10	1	0	10	70	24	0	115	27	6	0	7	318	7
7:45 A.M	0	7	15	8	0	20	87	18	0	92	54	17	0	5	398	5
TOTALS	0	11	47	19	0	43	293	90	0	382	127	34	0	23	1176	23

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
	PEDS	SBR	SBTH	SBL	PEDS	WBR	WBTH	WBL	PEDS	NBR	NBTH	NBL	PEDS	EBR	EBTH	EBL
5:00 A.M	0	9	63	19	0	3	338	85	0	27	30	6	0	20	70	7
5:15 A.M	0	1	48	11	0	10	326	69	0	37	33	8	0	7	74	6
5:30 A.M	0	8	42	14	0	12	231	52	0	21	25	5	0	34	62	11
5:45 A.M	0	2	41	14	0	2	191	42	0	26	31	4	0	7	72	5
TOTALS	0	20	194	58	0	27	1086	248	0	111	119	23	0	68	278	29
			272				1361				253				375	

TMCCOUNT_GALVESTON.xis

TURNING MOVEMENT COUNT

(T.M.C TAKEN AT THE SH 146 AT FM 1405 INTERSECTION)

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
	PEDS	SBR	SBTH	SBL	PEDS	WBR	WBTH	WBL	PEDS	NBR	NBTH	NBL	PEDS	EBR	EBTH	EBL
7:00 A.M	0	2	372	27	0	14	0	1	0	2	131	0	0	5	0	2
7:15 A.M	0	2	406	27	0	22	0	1	0	0	137	1	0	2	0	0
7:30 A.M	0	0	395	27	0	15	0	0	0	1	166	2	0	7	0	0
7:45 A.M	0	0	244	27	0	23	0	2	0	3	132	1	0	6	0	0
TOTALS	0	4	1417	108	0	74	0	4	0	6	566	4	0	20	0	2
			1529				78				576				22	

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
	PEDS	SBR	SBTH	SBL	PEDS	WBR	WBTH	WBL	PEDS	NBR	NBTH	NBL	PEDS	EBR	EBTH	EBL
5:00 A.M	0	0	261	17	0	68	0	4	0	2	347	5	0	2	0	0
5:15 A.M	0	2	249	19	0	57	0	4	0	6	436	2	0	2	0	1
5:30 A.M	0	2	230	19	0	51	0	5	0	7	413	11	0	2	0	1
5:45 A.M	0	2	232	23	0	45	0	11	0	15	388	4	0	5	0	2
TOTALS	0	6	972	78	0	221	0	24	0	30	1584	22	0	11	0	4
	I		1056		<u> </u>		245		1		1636				15	

TURNING MOVEMENT COUNT

(T.M.C TAKEN AT THE BUSINESS SH 146 AT SPUR 55 INTERSECTION)

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
	PEDS	SBR	SBTH	SBL	PEDS	WBR	WBTH	WBL	PEDS	NBR	NBTH	NBL	PEDS	EBR	EBTH	EBL
7:00 A.M	0	0	96	16	0	45	0	53	0	55	43	0	0	0	0	0
7:15 A.M	0	0	114	27	0	55	0	66	0	42	55	0	0	0	0	0
7:30 A.M	0	0	99	28	0	82	0	61	0	43	56	0	0	0	0	0
7:45 A.M	0	0	95	27	0	83	0	74	0	44	65	0	0	0	0	0
TOTALS	0	0	404	98	0	265	0	254	0	184	219	0	0	0	0	0
			502				519				403				0	

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
	PEDS	SBR	SBTH	SBL	PEDS	WBR	WBTH	WBL	PEDS	NBR	NBTH	NBL	PEDS	EBR	EBTH	EBL
5:00 A.M	0	0	59	19	0	85	0	84	0	74	153	0	0	0	0	0
5:15 A.M	0	0	56	21	0	71	0	92	0	78	192	0	0	0	0	0
5:30 A.M	0	0	90	27	0	69	0	123	0	93	162	0	0	0	0	0
5:45 A.M	0	0	52	26	0	56	0	130	0	80	171	0	0	0	0	0
TOTALS	0	0	257	93	0	281	0	429	0	325	678	0	0	0	0	0
			350				710				1003				0	

TURNING MOVEMENT COUNT

(T.M.C TAKEN AT THE SH 225 AT MILLERS CUT OFF INTERSECTION)
(NORTH INTERSECTION)

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
	PEDS	SBR	SBTH	SBL	PEDS	WBR	WBTH	WBL	PEDS	NBR	NBTH	NBL	PEDS	EBR	EBTH	EBL
7:00 A.M	0	5	6	0	0	43	2	2	0	0	69	37	0	0	0	0
7:15 A.M	0	5	8	0	0	50	0	4	0	0	58	34	0	0	0	0
7:30 A.M	0	4	8	0	0	30	0	6	0	0	51	21	0	0	0	0
7:45 A.M	0	16	10	0	0	27	1	10	0	0	35	20	0	0	0	0
TOTALS	0	30	32	0	0	150	3	22	0	0	213	112	0	0	0	0
			62				175				325				0	

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
	PEDS	SBR	SBTH	SBL	PEDS	WBR	WBTH	WBL	PEDS	NBR	NBTH	NBL	PEDS	EBR	EBTH	EBL
5:00 A.M	0	95	134	0	0	12	1	10	0	0	23	5	0	0	0	0
5:15 A.M	0	48	74	0	0	8	0	10	0	0	12	3	0	0	0	0
5:30 A.M	0	62	70	0	0	7	0	9	0	0	8	9	0	0	0	0
5:45 A.M	0	29	31	0	0	7	1	7	0	0	7	6	0	0	0	0
TOTALS	0	234	309	0	0	34	2	36	0	0	50	23	0	0	0	0
			5/13				72				73				0	

TURNING MOVEMENT COUNT

(T.M.C TAKEN AT THE SH 225 AT MILLERS CUT OFF INTERSECTION)
(SOUTH INTERSECTION)

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
	PEDS	SBR	SBTH	SBL	PEDS	WBR	WBTH	WBL	PEDS	NBR	NBTH	NBL	PEDS	EBR	EBTH	EBL
7:00 A.M	0	0	0	10	0	0	0	0	0	0	0	0	0	0	15	110
7:15 A.M	0	0	0	11	0	0	0	0	0	0	0	0	0	0	16	90
7:30 A.M	0	0	0	15	0	0	0	0	0	0	0	0	0	0	11	72
7:45 A.M	0	0	0	16	0	0	0	0	0	0	0	0	0	0	10	60
TOTALS	0	0	0	52	0	0	0	0	0	0	0	0	0	0	52	332
			52				0				0				384	

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
	PEDS	SBR	SBTH	SBL	PEDS	WBR	WBTH	WBL	PEDS	NBR	NBTH	NBL	PEDS	EBR	EBTH	EBL
5:00 A.M	0	0	0	154	0	0	0	0	0	0	0	0	0	0	8	28
5:15 A.M	0	0	0	94	0	0	0	0	0	0	0	0	0	0	15	15
5:30 A.M	0	0	0	88	0	0	0	0	0	0	0	0	0	0	13	17
5:45 A.M	0	0	0	45	0	0	0	0	0	0	0	0	0	0	9	13
TOTALS	0	0	0	381	0	0	0	0	0	0	0	0	0	0	45	73
			381				0				0				118	

TURNING MOVEMENT COUNT

(T.M.C TAKEN AT THE BATTLEGROUND (FM 134) AT MILLERS CUT OFF INTERSECTION)

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
	PEDS	SBR	SBTH	SBL	PEDS	WBR	WBTH	WBL	PEDS	NBR	NBTH	NBL	PEDS	EBR	EBTH	EBL
7:00 A.M	0	0	48	4	0	6	0	4	0	15	149	0	0	0	0	0
7:15 A.M	0	0	26	3	0	0	0	1	0	6	156	0	0	0	0	0
7:30 A.M	0	0	37	6	0	12	0	2	0	18	136	0	0	0	0	0
7:45 A.M	0	0	27	6	0	3	0	7	0	9	128	0	0	0	0	0
TOTALS	0	0	138	19	0	21	0	14	0	48	569	0	0	0	0	0
			157				35				617				0	

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
	PEDS	SBR	SBTH	SBL	PEDS	WBR	WBTH	WBL	PEDS	NBR	NBTH	NBL	PEDS	EBR	EBTH	EBL
5:00 A.M	0	0	232	1	0	8	0	139	0	4	57	0	0	0	0	0
5:15 A.M	0	0	146	1	0	6	0	21	0	9	73	0	0	0	0	0
5:30 A.M	0	0	133	7	0	6	0	61	0	11	47	0	0	0	0	0
5:45 A.M	0	0	97	3	0	2	0	16	0	2	39	0	0	0	0	0
TOTALS	0	0	608	12	0	22	0	237	0	26	216	0	0	0	0	0
	1		620		1		259				242		I		0	

TURNING MOVEMENT COUNT

OPEN

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
	PEDS	SBR	SBTH	SBL	PEDS	WBR	WBTH	WBL	PEDS	NBR	NBTH	NBL	PEDS	EBR	EBTH	EBL
7:00 A.M	0				0				0				0			
7:15 A.M	0				0				0				0			
7:30 A.M	0				0				0				0			
7:45 A.M	0				0				0				0			
TOTALS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			0				0				0				0	

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
	PEDS	SBR	SBTH	SBL	PEDS	WBR	WBTH	WBL	PEDS	NBR	NBTH	NBL	PEDS	EBR	EBTH	EBL
5:00 A.M					0				0				0			
5:15 A.M					0				0				0			
5:30 A.M	0				0				0				0			
5:45 A.M	0				0				0				0			
TOTALS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
											^				0	

TURNING MOVEMENT COUNT

(T.M.C TAKEN AT THE FM 225 AT BATTLEGROUND (FM 134) INTERSECTION)

(NORTH	INTERSECTION)	
UNCHILL		

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
	PEDS	SBR	SBTH	SBL	PEDS	WBR	WBTH	WBL	PEDS	NBR	NBTH	NBL	PEDS	EBR	EBTH	EBL
7:00 A.M	0	49	34	0	0	85	0	36	0	0	227	194	0	0	0	. 0
7:15 A.M	0	21	57	0	0	71	0	26	0	0	166	195	0	0	0	0
7:30 A.M	0	21	38	0	0	55	0	27	0	0	153	165	0	0	0	0
7:45 A.M	0	27	41	0	0	40	0	38	0	0	175	148	0	0	0	0
TOTALS	0	118	170	0	0	251	0	127	0	0	721	702	0	0	0	0
			288	,			279				1/12				Λ	

288 378 1423

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
	PEDS	SBR	SBTH	SBL	PEDS	WBR	WBTH	WBL	PEDS	NBR	NBTH	NBL	PEDS	EBR	EBTH	EBL
5:00 P.M	0	215	213	0	0	18	1	38	0	0	80	79	0	0	0	0
5:15 P.M	0	133	185	0	0	18	3	49	0	0	76	76	0	0	0	0
5:30 P.M	0	1123	147	0	0	15	0	32	0	0	47	68	0	0	0	0
5:45 P.M	0	78	94	0	0	12	1	26	0	0	60	69	0	0	0	0
TOTALS	0	1549	639	0	0	63	5	145	0	0	263	292	0	0	0	0

2188

213

555

TURNING MOVEMENT COUNT

(T.M.C TAKEN AT THE FM 225 AT BATTLEGROUND (FM 134) INTERSECTION)

(SOUTH INTERSECTION)

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
	PEDS	SBR	SBTH	SBL	PEDS	WBR	WBTH	WBL	PEDS	NBR	NBTH	NBL	PEDS	EBR	EBTH	EBL
7:00 A.M	0	0	42	10	0	0	0	0	0	22	175	0	0	50	16	133
7:15 A.M	0	0	31	13	0	0	0	0	0	53	215	0	0	61	11	99
7:30 A.M	0	0	38	15	0	0	0	0	0	52	204	0	0	64	13	111
7:45 A.M	0	0	59	8	0	0	0	0	0	38	183	0	0	67	23	82
TOTALS	0	0	170	46	0	0	0	0	0	165	777	0	0	242	63	425
			216				0				942				730	

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
	PEDS	SBR	SBTH	SBL	PEDS	WBR	WBTH	WBL	PEDS	NBR	NBTH	NBL	PEDS	EBR	EBTH	EBL
5:00 P.M	0	0	153	89	0	0	0	0	0	29	92	0	0	106	36	67
5:15 P.M	0	0	139	100	0	0	0	0	0	45	70	0	0	142	33	80
5:30 P.M	0	0	127	93	0	0	0	0	0	44	79	0	0	129	19	58
5:45 P.M	0	0	86	94	0	0	0	0	0	27	68	0	0	127	15	53

88

0

454

865

TURNING MOVEMENT COUNT

(IH-45 and North SH-146 "U" Turn)

(West Ramp)

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
	PEDS	SBR	SBTH	SBL	PEDS	WBR	WBTH	WBL	PEDS	NBR	NBTH	NBL	PEDS	EBR	EBTH	EBL
7:00 A.M.	0	0	0	52	0	0	0	0	0	0	0	0	0	0	72	0
7:15 A.M.	0	0	0	46	0	0	0	0	0	0	0	0	0	0	85	0
7:30 A.M.	0	0	0	49	0	0	0	0	0	0	0	0	0	0	91	0
7:45 A.M.	0	0	0	34	0	0	0	0	0	0	0	0	0	0	75	0
TOTALS	0	0	0	181	0	0	0	0	0	0	0	0	0	0	323	0
	181					<u> </u>								323		

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
	PEDS	SBR	SBTH	SBL	PEDS	WBR	WBTH	WBL	PEDS	NBR	NBTH	NBL	PEDS	EBR	EBTH	EBL
5:00 P.M.																
5:15 P.M.																
5:30 P.M.																
5:45 P.M.																
TOTALS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			Λ								Λ				Λ	

Date: 5/22/01

TURNING MOVEMENT COUNT

(IH-45 and North SH-146 "U" Turn)

(East Ramp)

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
	PEDS	SBR	SBTH	SBL	PEDS	WBR	WBTH	WBL	PEDS	NBR	NBTH	NBL	PEDS	EBR	EBTH	EBL
7:00 A.M.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	77	46
7:15 A.M.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	50
7:30 A.M.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	72	65
7:45 A.M.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	58	43
TOTALS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	287	204
	0					0			0					491		

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
	PEDS	SBR	SBTH	SBL	PEDS	WBR	WBTH	WBL	PEDS	NBR	NBTH	NBL	PEDS	EBR	EBTH	EBL
5:00 P.M.																
5:15 P.M.																
5:30 P.M.																
5:45 P.M.																
TOTALS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

APPENDIX C-3

PROPOSED CONTAINER TERMINAL TRUCK/RAIL TRAFFIC MOVEMENTS

Shoal Point Container Terminal Preliminary Annual Traffic Movements

Assumptions	
1. Intermodal Splits:	
Truck	80%
Rail	20%
2. Truck/Quay Move Equivalent (Highway)	1.70
3. Truck/Quay Move Equivalent (Intermodal)	2.00
4. Bare Chassis/Bobtail Equivalent (% of Truck/Quay Move Equivalent "Highway")	10%
5. Bare Chassis/Bobtail Equivalent (% of Truck/Quay Move Equivalent "Intermodal")	50%
6. TEU Equivalent:	1.60
7. Days of yearly operation:	260
8. Hours of operation/day:	11
9. Rail cars are 55' bogey-bogey, double stacked.	

		_
Total Truck / Quay Move:	1.76	
Total FCL/MT:	81%	
Total Bare/Bobtail;	19%	

Highway Truck Trips:	77%
Intermodal Truck Trips:	23%

						,	Truck Traffic	2				
Quay		.					Annual					
(Container) Moves	TEU	Approx. Year	Trucks (Highway)			Trucks (Intermodal)				Total	Description	
1.20 / 0.5			FCL/Empty	Bare Chassis/ Bobtail	Total	FCL/Empty	Bare Chassis/ Bobtail	Total	FCL/Empty	Bare Chassis/ Bobtail	Total	
315,000	504,000	2004	385,560	42,840	428,400	63,000	63,000	126,000	448,560	105,840	554,400	Phase I Operational
330,000	528,000	2005	403,920	44,880	448,800	66,000	66,000	132,000	469,920	110,880	580,800	
345,000	552,000	2006	422,280	46,920	469,200	69,000	69,000	138,000	491,280	115,920	607,200	
360,000	576,000	2007	440,640	48,960	489,600	72,000	72,000	144,000	512,640	120,960	633,600	
375,000	600,000	2008	459,000	51,000	510,000	75,000	75,000	150,000	534,000	126,000	660,000	Phase II Operational
400,000	640,000	2009	489,600	54,400	544,000	80,000	80,000	160,000	569,600	134,400	704,000	
425,000	680,000	2010	520,200	57,800	578,000	85,000	85,000	170,000	605,200	142,800	748,000	
450,000	720,000	2011	550,800	61,200	612,000	90,000	90,000	180,000	640,800	151,200	792,000	
475,000	760,000	2012	581,400	64,600	646,000	95,000	95,000	190,000	676,400	159,600	836,000	
500,000	800,000	2013	612,000	68,000	680,000	100,000	100,000	200,000	712,000	168,000	880,000	
525,000	840,000	2014	642,600	71,400	714,000	105,000	105,000	210,000	747,600	176,400	924,000	
550,000	880,000	2015	673,200	74,800	748,000	110,000	110,000	220,000	783,200	184,800	968,000	
575,000	920,000	2016	703,800	78,200	782,000	115,000	115,000	230,000	818,800	193,200	1,012,000	Phase III Operational
600,000	960,000	2017	734,400	81,600	816,000	120,000	120,000	240,000	854,400	201,600	1,056,000	
708,000	1,132,800	2018	866,592	96,288	962,880	141,600	141,600	283,200	1,008,192	237,888	1,246,080	
816,000	1,305,600	2019	998,784	110,976	1,109,760	163,200	163,200	326,400	1,161,984	274,176	1,436,160	
924,000	1,478,400	2020	1,130,976	125,664	1,256,640	184,800	184,800	369,600	1,315,776	310,464	1,626,240	
1,032,000	1,651,200	2021	1,263,168	140,352	1,403,520	206,400	206,400	412,800	1,469,568	346,752	1,816,320	
1,140,000	1,824,000	2022	1,395,360	155,040	1,550,400	228,000	228,000	456,000	1,623,360	383,040	2,006,400	
1,250,000	2,000,000	2023	1,530,000	170,000	1,700,000	250,000	250,000	500,000	1,780,000	420,000	2,200,000	
1,529,000	2,446,400	Unknown	1,871,496	207.944	2.079,440	305,800	305,800	611,600	2,177,296	513,744	2.691,040	Ultimate Design

SPtrfcmov.xls 12/14/01

Shoal Point Container Terminal Preliminary Daily Traffic Movements

Assumptions

1.	Intermodal Splits:	
	Truck	80%
	Rail	20%
2.	Truck/Quay Move Equivalent (Highway)	1.70
3.	. Truck/Quay Move Equivalent (Intermodal)	2.00
4.	. Bare Chassis/Bobtail Equivalent (% of Truck/Quay Move Equivalent "Highway")	10%
5.	. Bare Chassis/Bobtail Equivalent (% of Truck/Quay Move Equivalent "Intermodal")	50%
6.	TEU Equivalent:	1.60
7.	Days of yearly operation:	260
8.	Hours of operation/day:	11
9.	. Rail cars are 55' bogey-bogey, double stacked.	

Total Truck / Quay Move:	1.76	
Total FCL/MT:	81%	
Total Bare/Bobtail:	19%	

Highway Truck Trips:	77%
Intermodal Truck Trips:	23%

						,	Truck Traffic					
Quay		Approx. Year					Daily	***************************************		***************************************		
(Container) Moves	TEU			Trucks (Highway)			Trucks (Intermodal)			Total		Description
			FCL/Empty	Bare Chassis/ Bobtail	Total	FCL/Empty	Bare Chassis/ Bobtail	Total	FCL/Empty	Bare Chassis/ Bobtail	Total	
315,000	504,000	2004	1,483	165	1,648	242	242	485	1,725	407	2,132	Phase I Operational
330,000	528,000	2005	1,554	173	1,726	254	254	508	1,807	426	2,234	
345,000	552,000	2006	1,624	180	1,805	265	265	531	1,890	446	2,335	
360,000	576,000	2007	1,695	188	1,883	277	277	554	1,972	465	2,437	
375,000	600,000	2008	1,765	196	1,962	288	288	577	2,054	485	2,538	Phase II Operational
400,000	640,000	2009	1,883	209	2,092	308	308	615	2,191	517	2,708	
425,000	680,000	2010	2,001	222	2,223	327	327	654	2,328	549	2,877	
450,000	720,000	2011	2,118	235	2,354	346	346	692	2,465	582	3,046	
475,000	760,000	2012	2,236	248	2,485	365	365	731	2,602	614	3,215	
500,000	800,000	2013	2,354	262	2,615	385	385	769	2,738	646	3,385	
525,000	840,000	2014	2,472	275	2,746	404	404	808	2,875	678	3,554	
550,000	880,000	2015	2,589	288	2,877	423	423	846	3,012	711	3,723	
575,000	920,000	2016	2,707	301	3,008	442	442	885	3,149	743	3,892	Phase III Operational
600,000	960,000	2017	2,825	314	3,138	462	462	923	3,286	775	4,062	
708,000	1,132,800	2018	3,333	370	3,703	545	545	1,089	3,878	915	4,793	
816,000	1,305,600	2019	3,841	427	4,268	628	628	1,255	4,469	1,055	5,524	
924,000	1,478,400	2020	4,350	483	4,833	711	711	1,422	5,061	1,194	6,255	
1,032,000	1,651,200	2021	4,858	540	5,398	794	794	1,588	5,652	1,334	6,986	
1,140,000	1,824,000	2022	5,367	596	5,963	877	877	1,754	6,244	1,473	7,717	
1,250,000	2,000,000	2023	5,885	654	6,538	962	962	1,923	6,846	1,615	8,462	
1.529.000	2,446,400	Unknown	7,198	800	7.998	1,176	1.176	2,352	8.374	1.976	10.350	Ultimate Design

SPtrfcmov.xls

Shoal Point Container Terminal Preliminary Hourly Traffic Movements

Assumptions

1. Intermodal Splits:	
Truck	80%
Rail	20%
2. Truck/Quay Move Equivalent (Highway)	1.70
3. Truck/Quay Move Equivalent (Intermodal)	2.00
4. Bare Chassis/Bobtail Equivalent (% of Truck/Quay Move Equivalent "Highway")	10%
5. Bare Chassis/Bobtail Equivalent (% of Truck/Quay Move Equivalent "Intermodal")	50%
6. TEU Equivalent:	1.60
7. Days of yearly operation;	260
8. Hours of operation/day:	11
9. Rail cars are 55' bogey-bogey, double stacked.	

Total Truck / Quay Move:	1.76	
Total FCL/MT:	81%	
Total Bare/Bobtail:	19%	

Highway Truck Trips: 77%
Intermodal Truck Trips: 23%

Quay (Container) Moves	TEU	U Approx. Year	Truck Traffic								-	
			Hourly									
			Trucks (Highway)			Trucks (Intermodal)			Total			Description
			FCL/Empty	Bare Chassis/ Bobtail	Total	FCL/Empty	Bare Chassis/ Bobtail	Total	FCL/Empty	Bare Chassis/ Bobtail	Total	
315,000	504,000	2004	135	15	150	22	22	44	157	37	194	Phase I Operational
330,000	528,000	2005	141	16	157	23	23	46	164	39	203	
345,000	552,000	_2006	148	16	164	24	24	48	172	41	212	
360,000	576,000	2007	154	17	171	25	25	50	179	42	222	
375,000	600,000	2008	160	18	178	26	26	52	187	44	231	Phase II Operationa
400,000	640,000	2009	171	19	190	28	28	56	199	47	246	
425,000	680,000	2010	182	20	202	30	30	59	212	50	262	
450,000	720,000	2011	193	21	214	31	31	63	224	53	277	1
475,000	760,000	2012	203	23	226	33	33	66	237	56	292	
500,000	800,000	2013	214	24	238	35	35	70	249	59	308	
525,000	840,000	2014	225	25	250	37	37	73	261	62	323	
550,000	880,000	2015	235	26	262	38	38	77	274	65	338	
575,000	920,000	2016	246	27	273	40	40	80	286	68	354	Phase III Operationa
600,000	960,000	2017	257	29	285	42	42	84	299	70	369	
708,000	1,132,800	2018	303	34	337	50	50	99	353	83	436	
816,000	1,305,600	2019	349	39	388	57	57	114	406	96	502	
924,000	1,478,400	2020	395	44	439	65	65	129	460	109	569	
1,032,000	1,651,200	2021	442	49	491	72	72	144	514	121	635	
1,140,000	1,824,000	2022	488	54	542	80	80	159	568	134	702	
1,250,000	2,000,000	2023	535	59	594	87	87	175	622	147	769	
1.529.000	2,446,400	Unknown	654	73	727	107	107	214	761	180	941	Ultimate Design

SPtrfcmov.xls 12/14/01

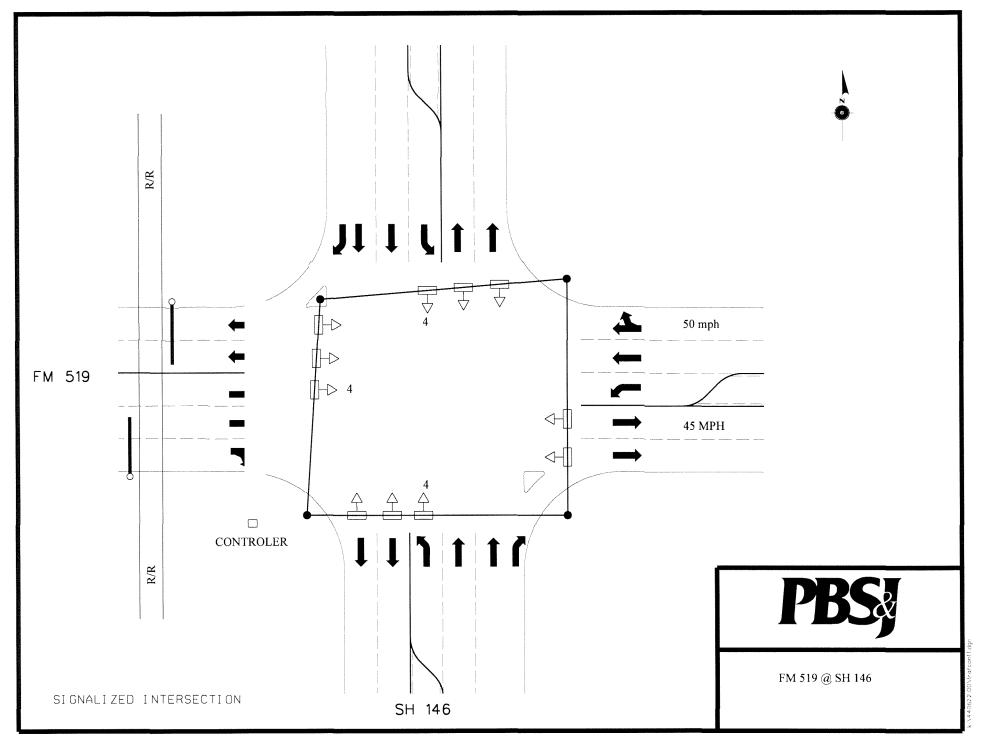
Shoal Point Container Terminal Preliminary Rail Traffic Movements

Assumptions

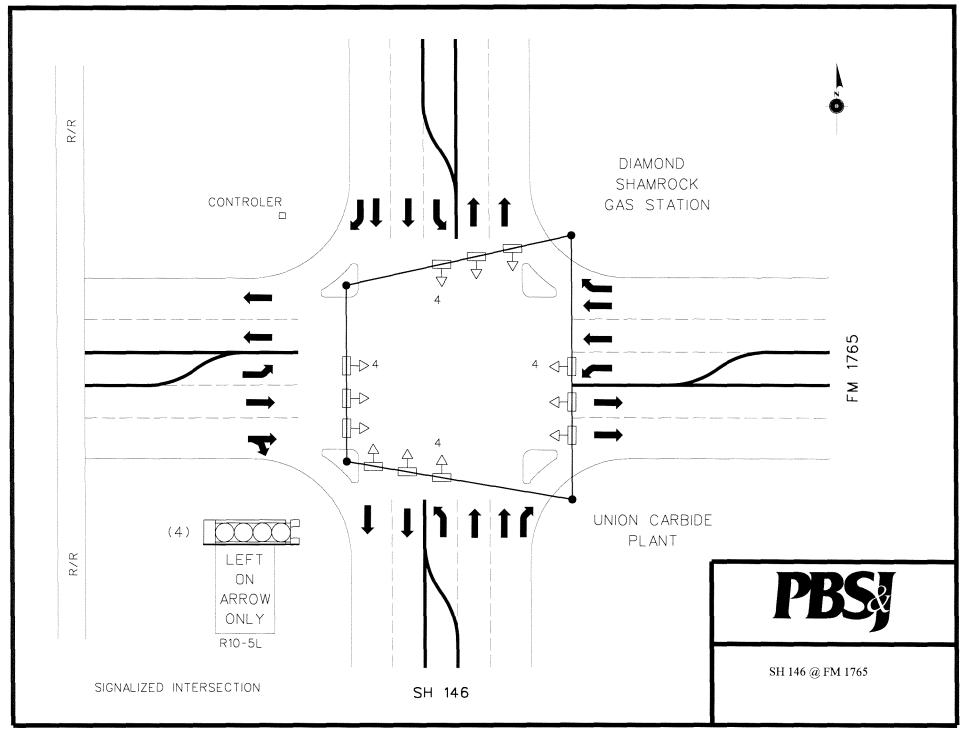
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1. Intermodal Splits:	
Truck	80%
Rail	20%
2. Truck/Quay Move Equivalent (Highway)	1.70
3. Truck/Quay Move Equivalent (Intermodal)	2.00
4. Bare Chassis/Bobtail Equivalent (% of Truck/Quay Move Equivalent "Highway")	10%
5. Bare Chassis/Bobtail Equivalent (% of Truck/Quay Move Equivalent "Intermodal")	50%
6. TEU Equivalent:	1.60
7. Days of yearly operation:	260
8. Hours of operation/day:	11
9. Rail cars are 55' bogey-bogey, double stacked.	

			Rail Car	r Traffic			
Quay (Container) Moves	TEU	Approx. Year	Annual	Daily	Description		
315,000	504,000	2004	25,200	97	Phase I Operational		
330,000	528,000	2005	26,400	102			
345,000	552,000	2006	27,600	106			
360,000	576,000	2007	28,800	111			
375,000	600,000	2008	30,000	115	Phase II Operational		
400,000	640,000	2009	32,000	123			
425,000	680,000	2010	34,000	131			
450,000	720,000	2011	36,000	138			
475,000	760,000	2012	38,000	146			
500,000	800,000	2013	40,000	154			
525,000	840,000	2014	42,000	162			
550,000	880,000	2015	44,000	169			
575,000	920,000	2016	46,000	177	Phase III Operational		
600,000	960,000	2017	48,000	185			
708,000	1,132,800	2018	56,640	218			
816,000	1,305,600	2019	65,280	251			
924,000	1,478,400	2020	73,920	284			
1,032,000	1,651,200	2021	82,560	318			
1,140,000	1,824,000	2022	91,200	351			
1,250,000	2,000,000	2023	100,000	385			
1,529,000	2,446,400	Unknown	122,320	470	Ultimate Design		

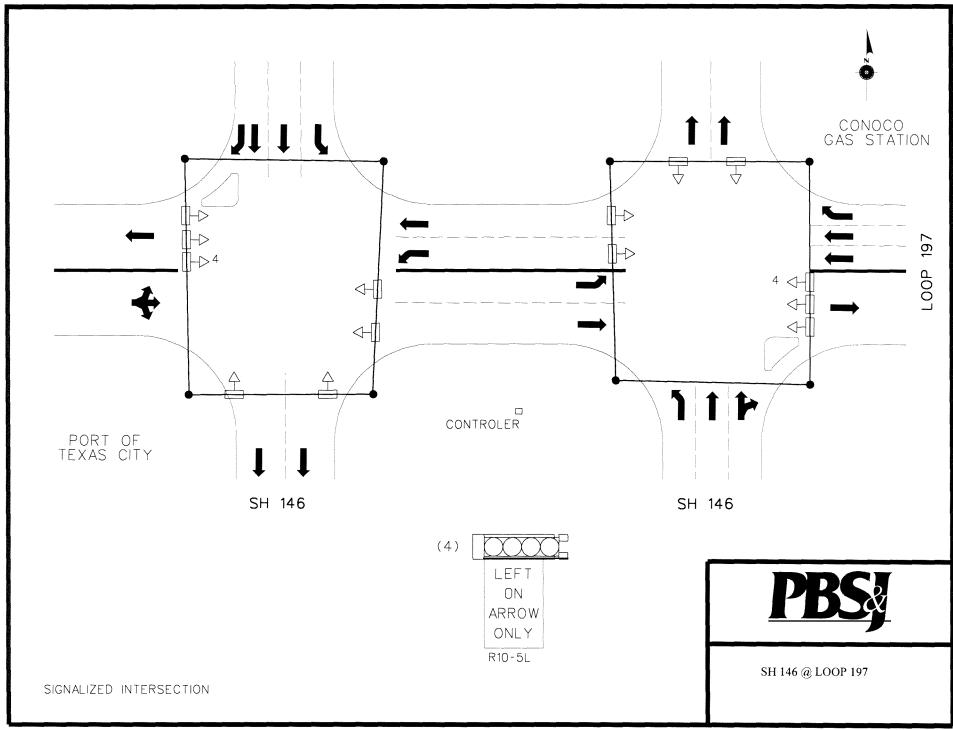
APPENDIX C-4 INTERSECTION SCHEMATICS – SHOAL POINT



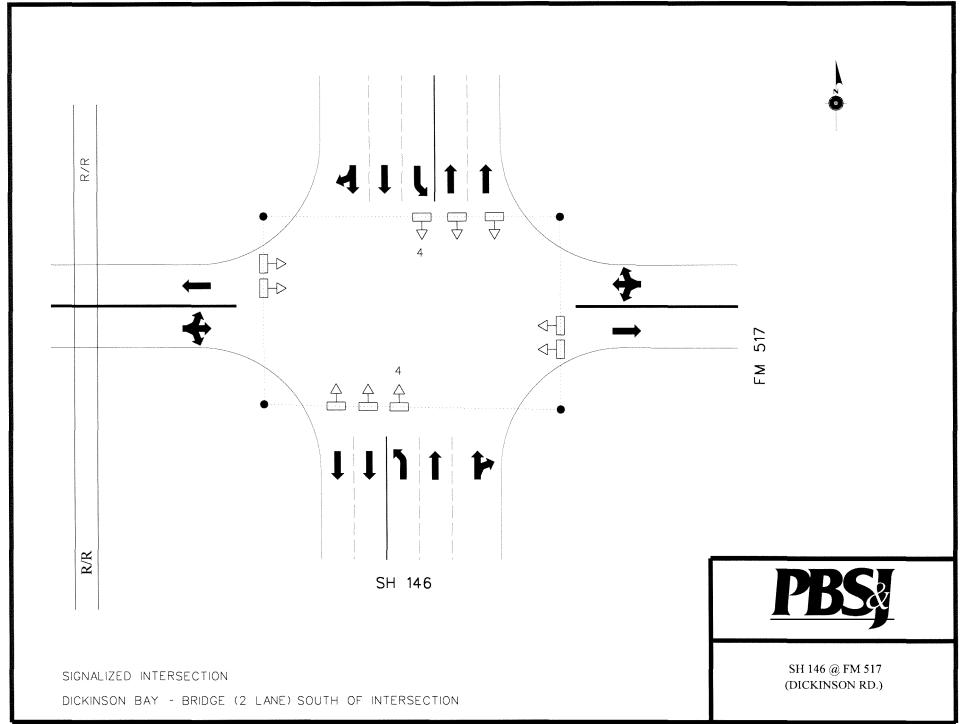
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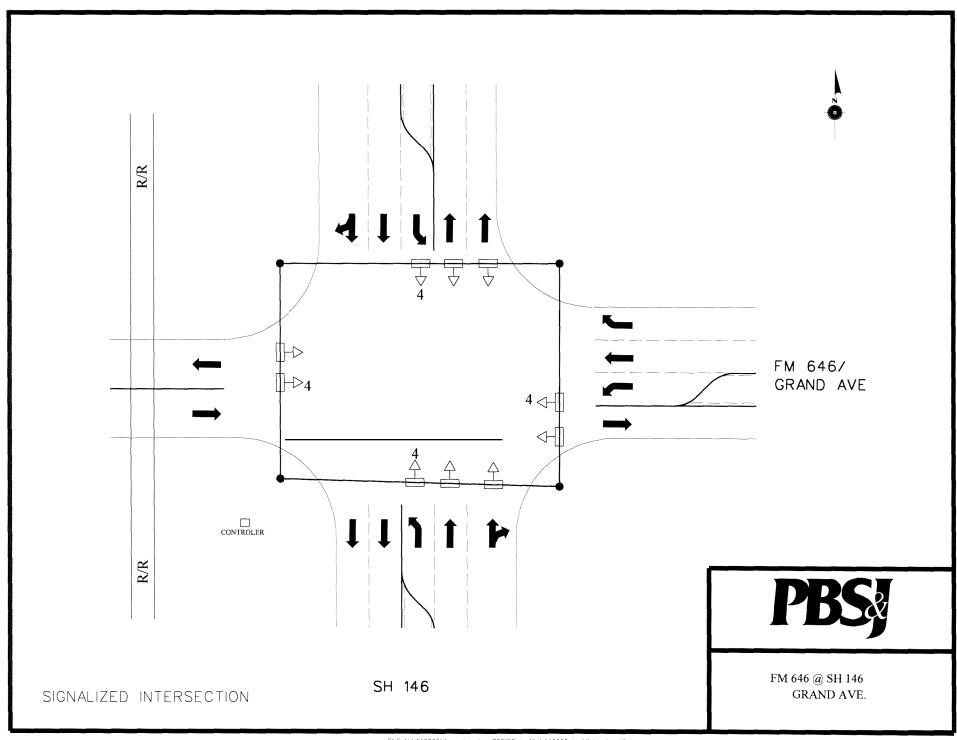


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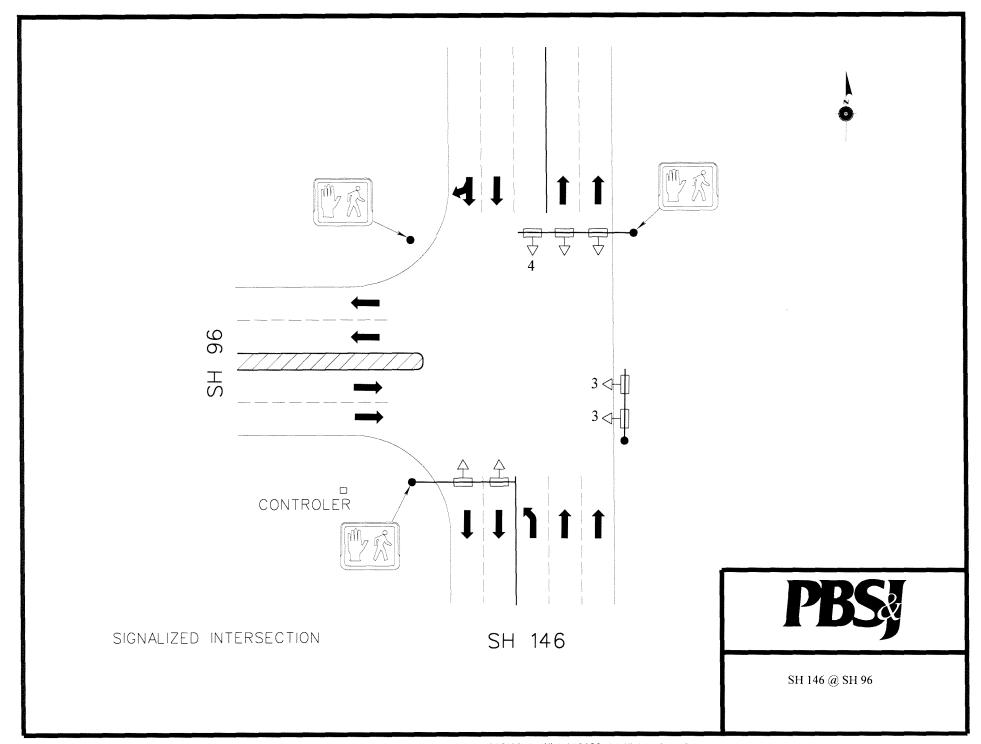


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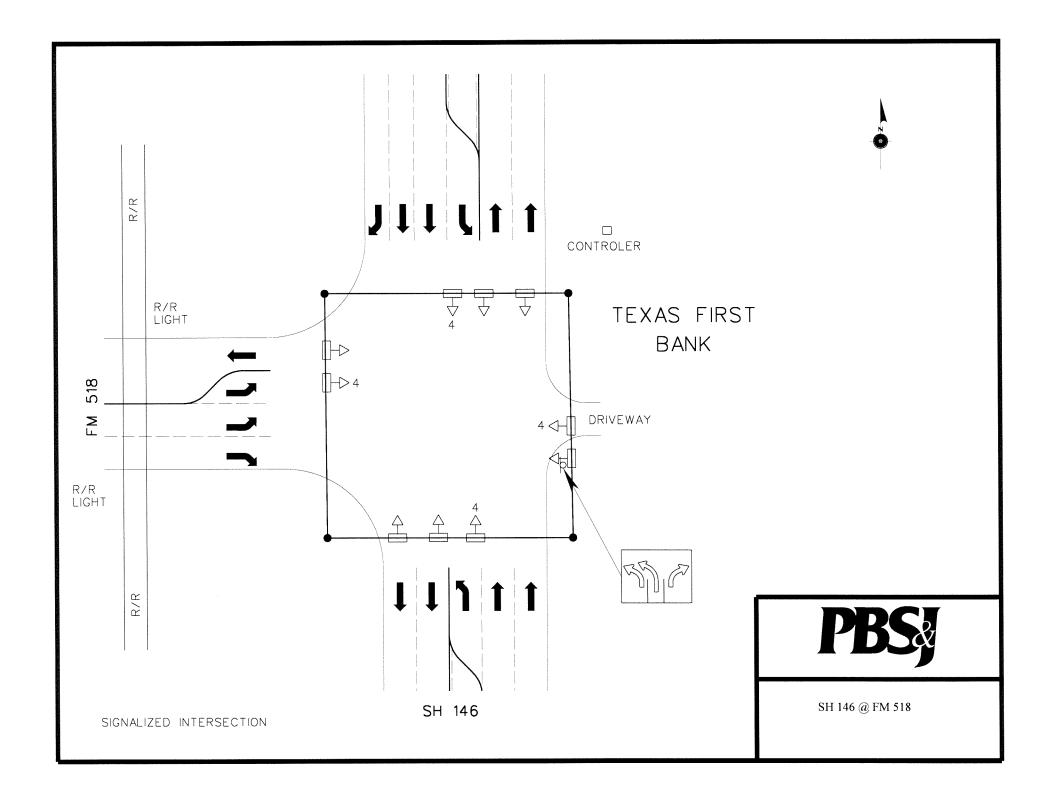


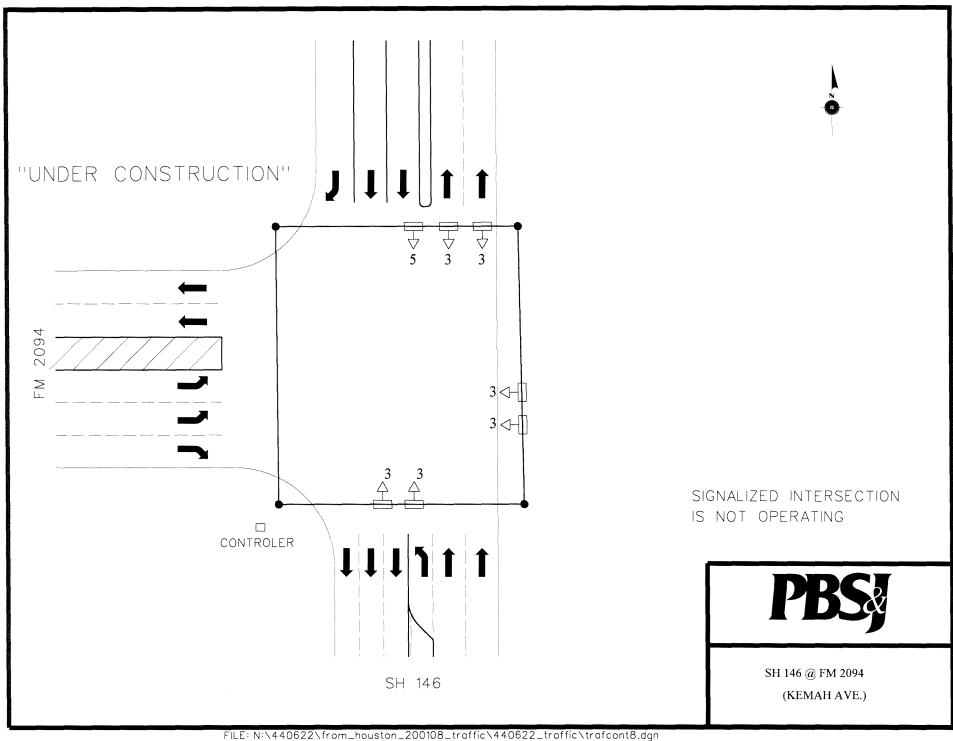


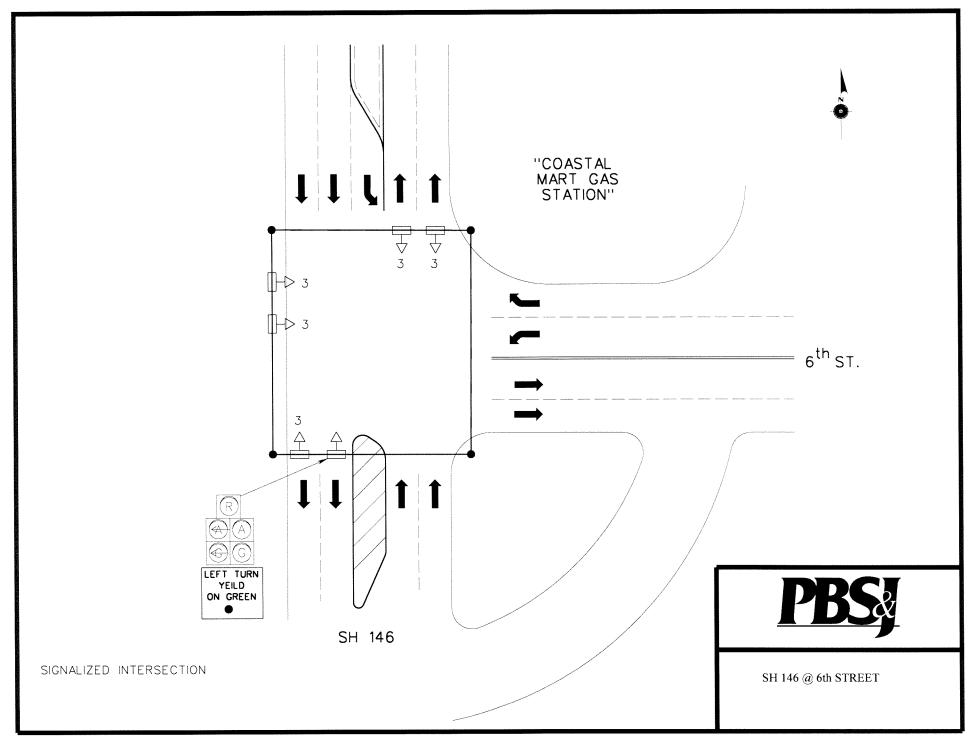
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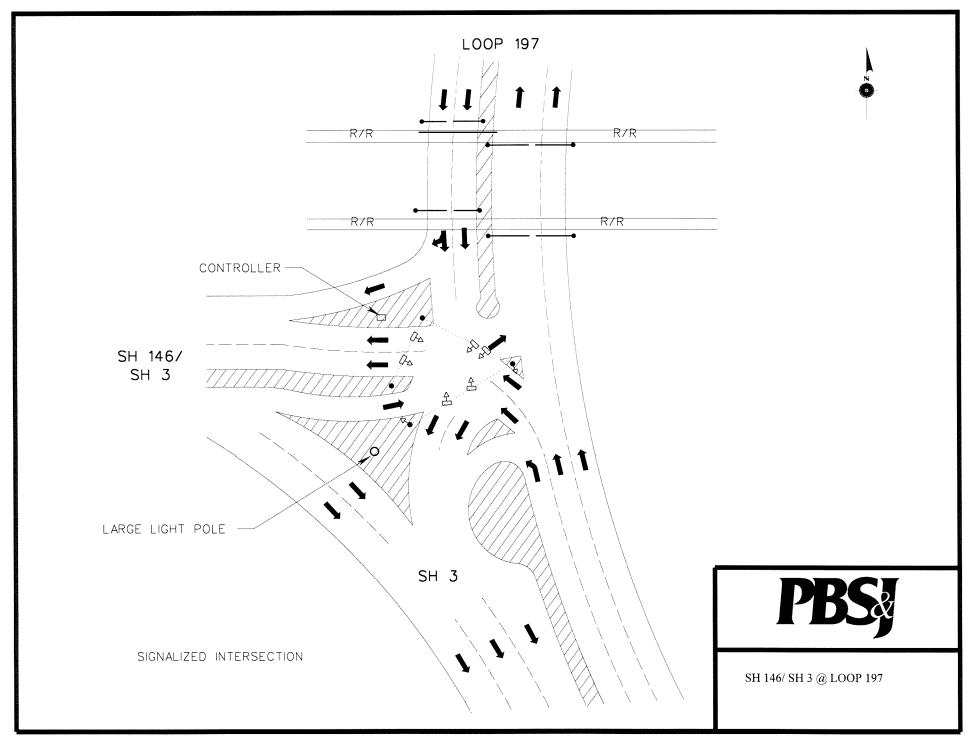
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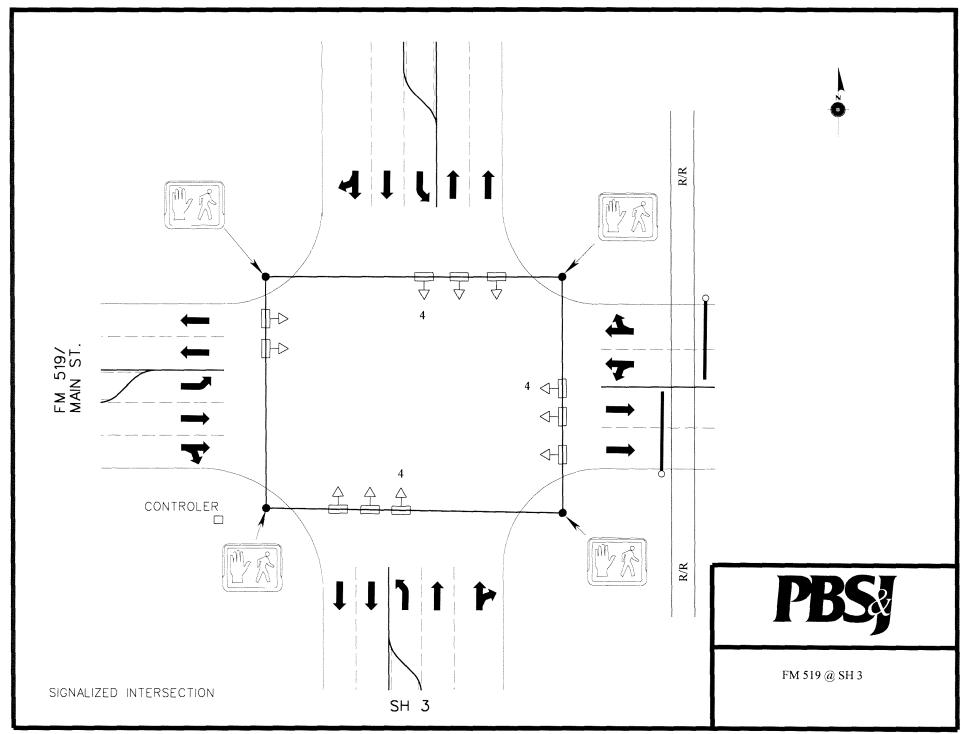




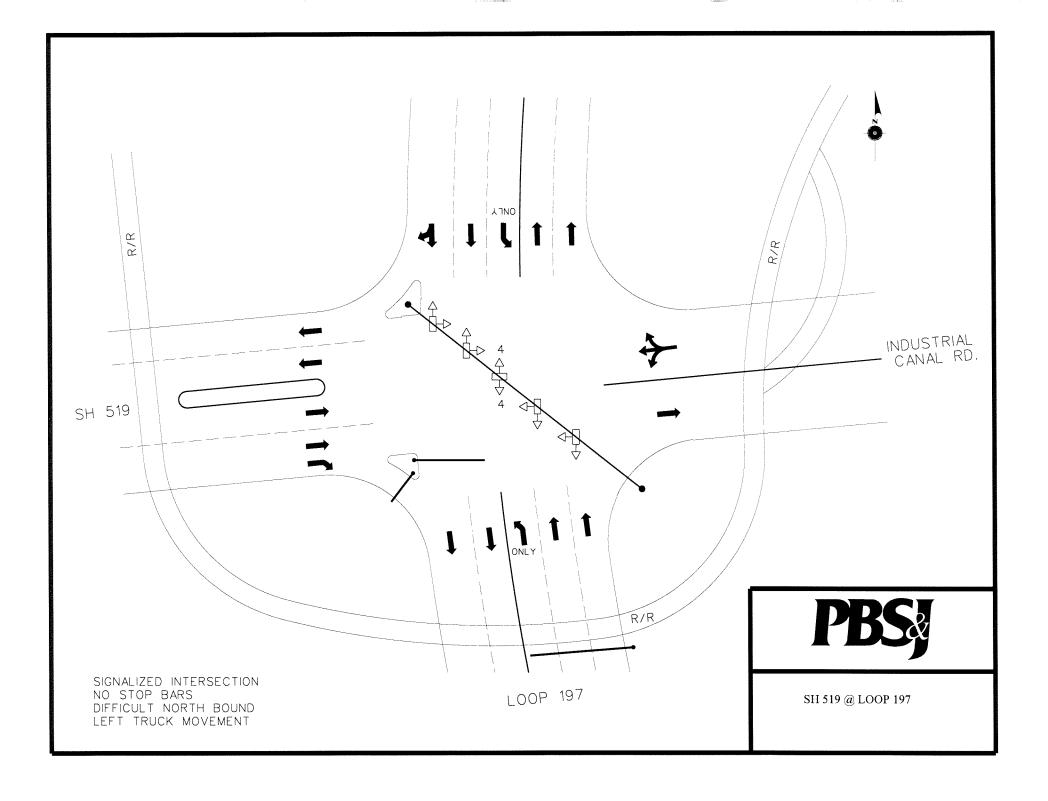


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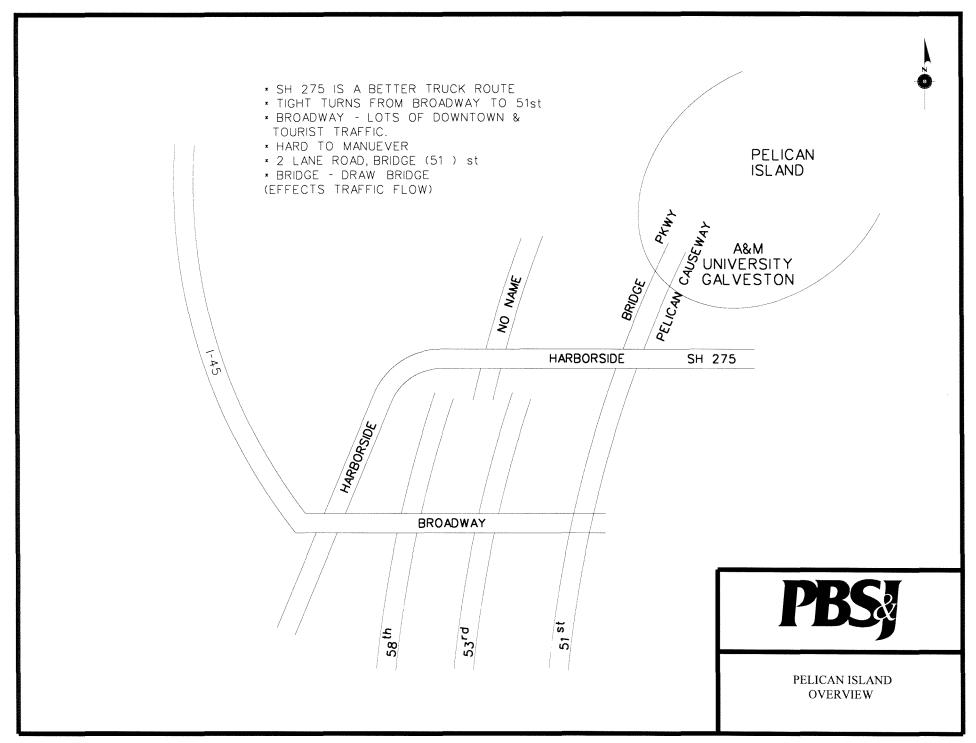


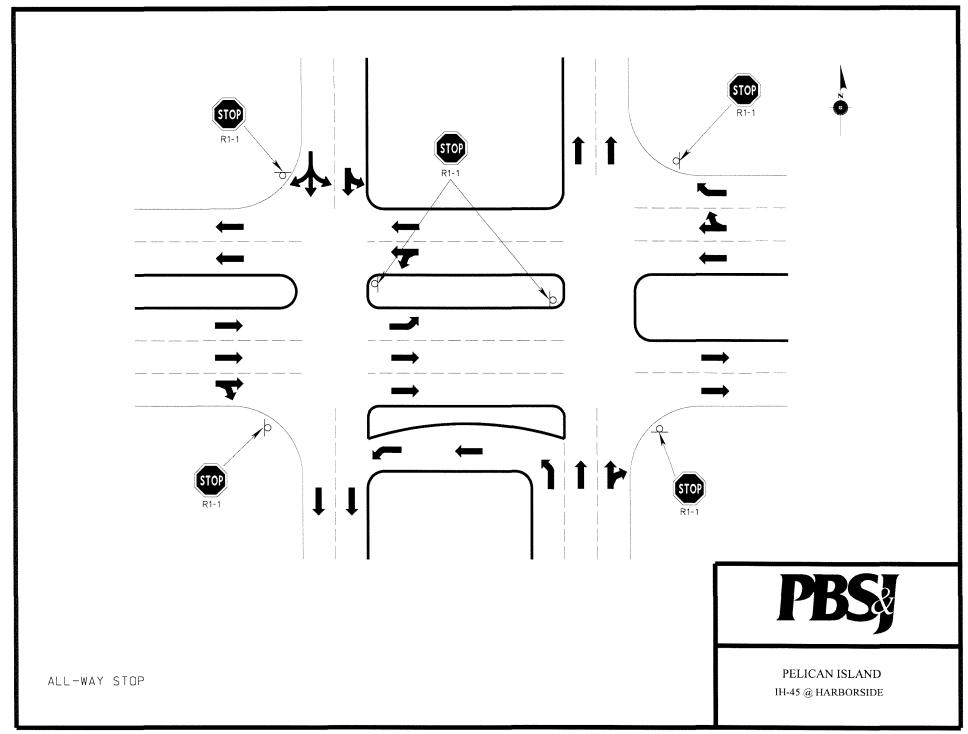
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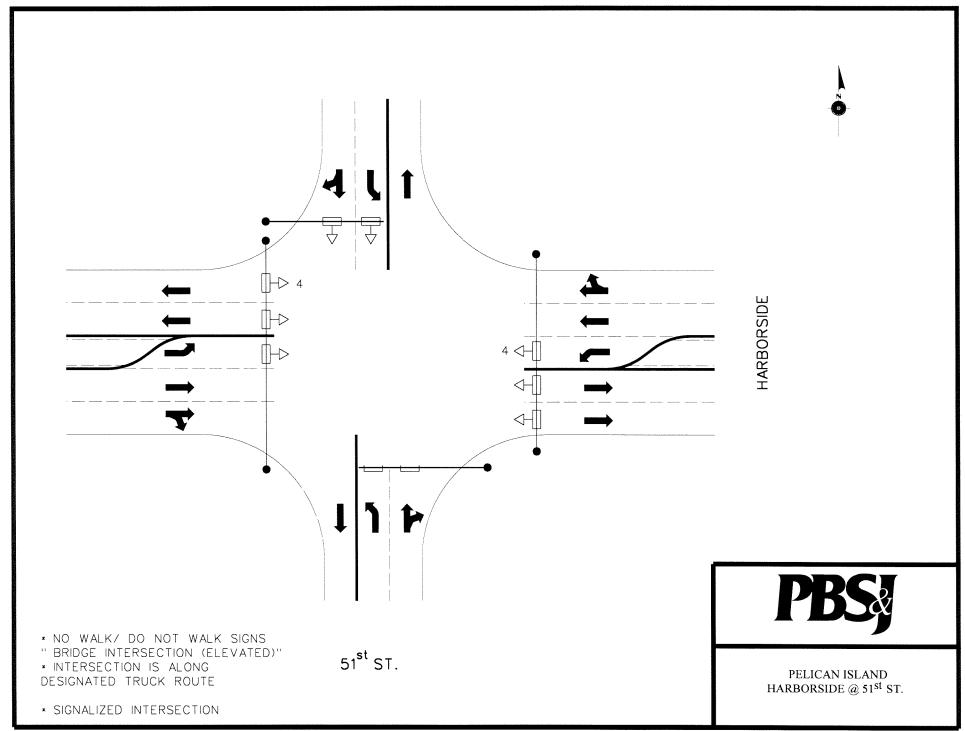


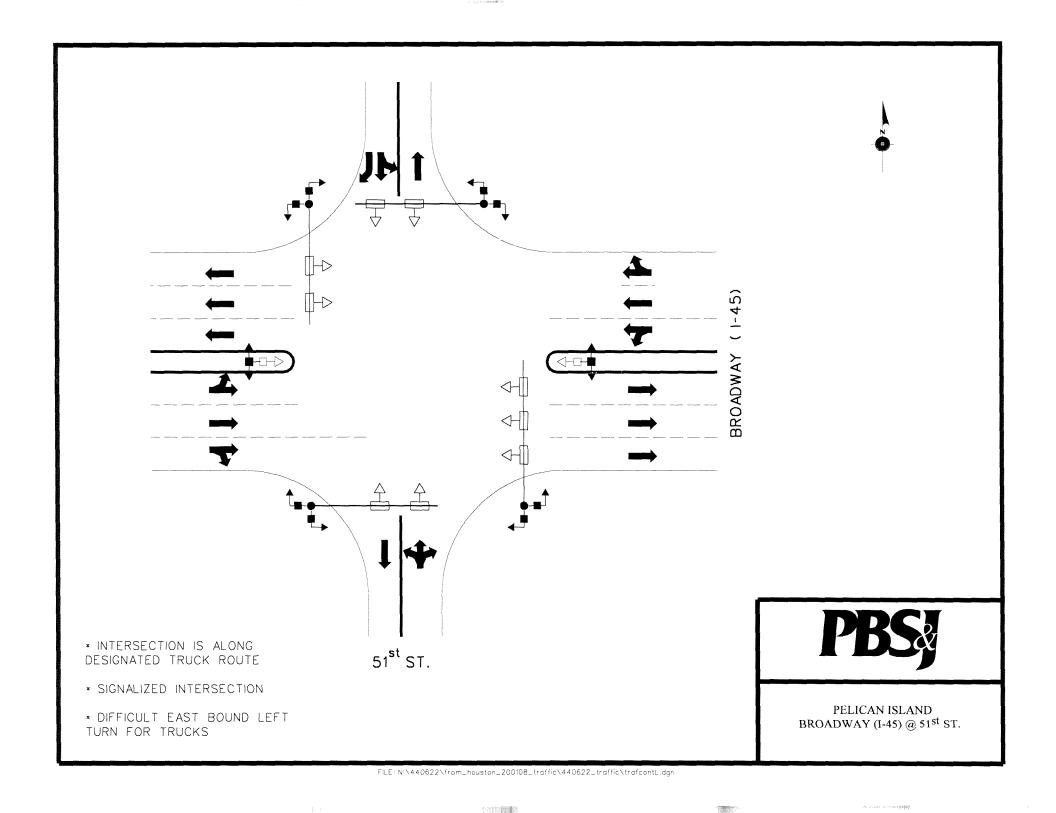
APPENDIX C-5

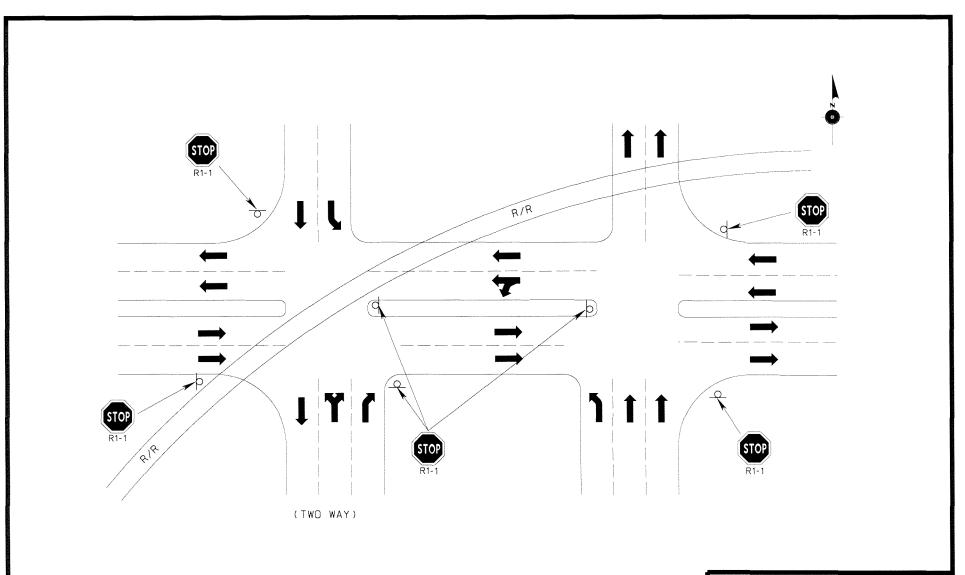
INTERSECTION SCHEMATICS - ALTERNATIVE SITES











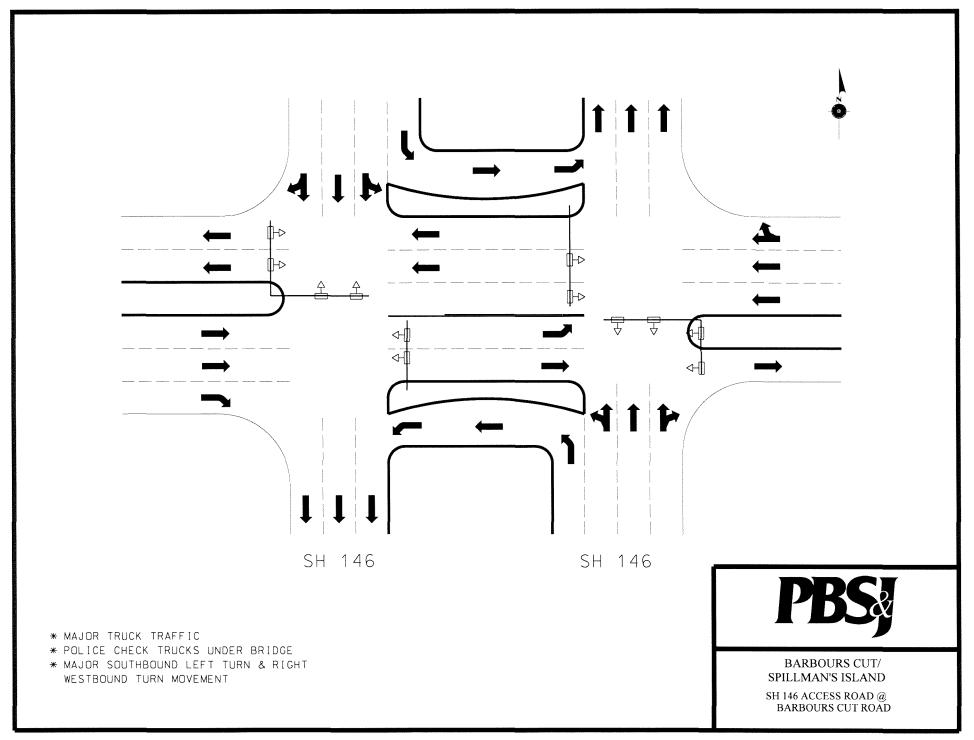
NOT SIGNALIZED

* PORT LEAD TO RESIDENTIAL AREA AND CHEMICAL PLANT AND ASSEMBLY YARDS

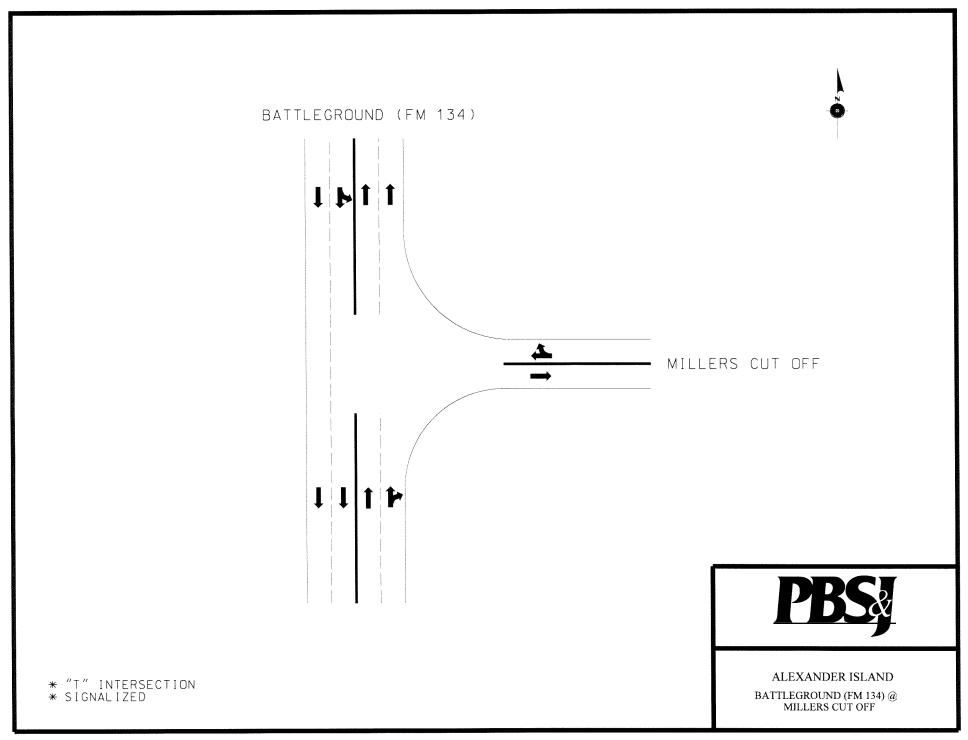
* SH 146 MAINLANES ARE ELEVATED AT THIS LOCATION

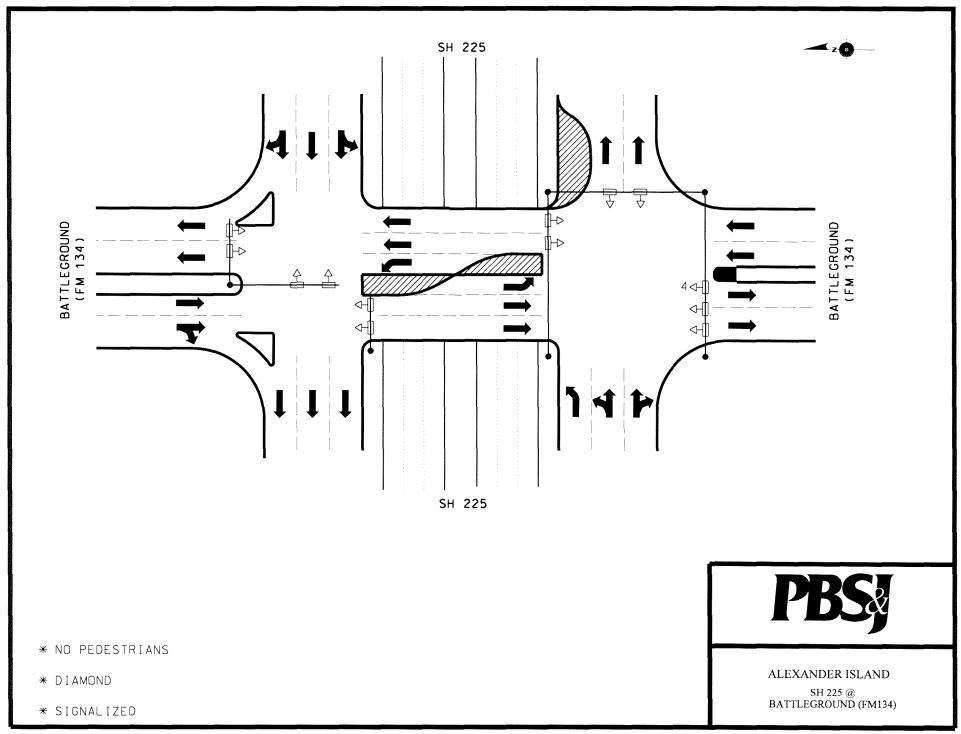


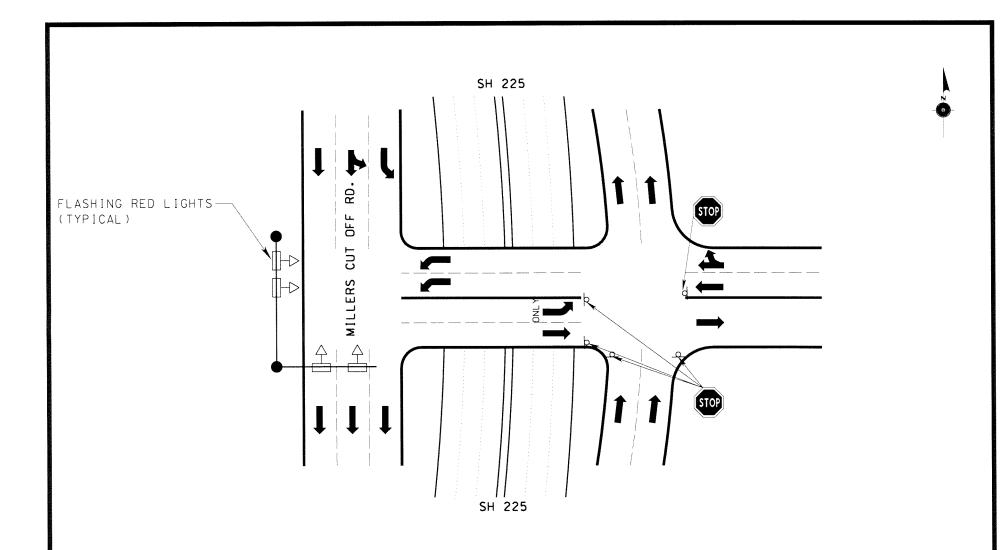
BAYPORT SH 146 ACCESS ROAD @ PORT ROAD



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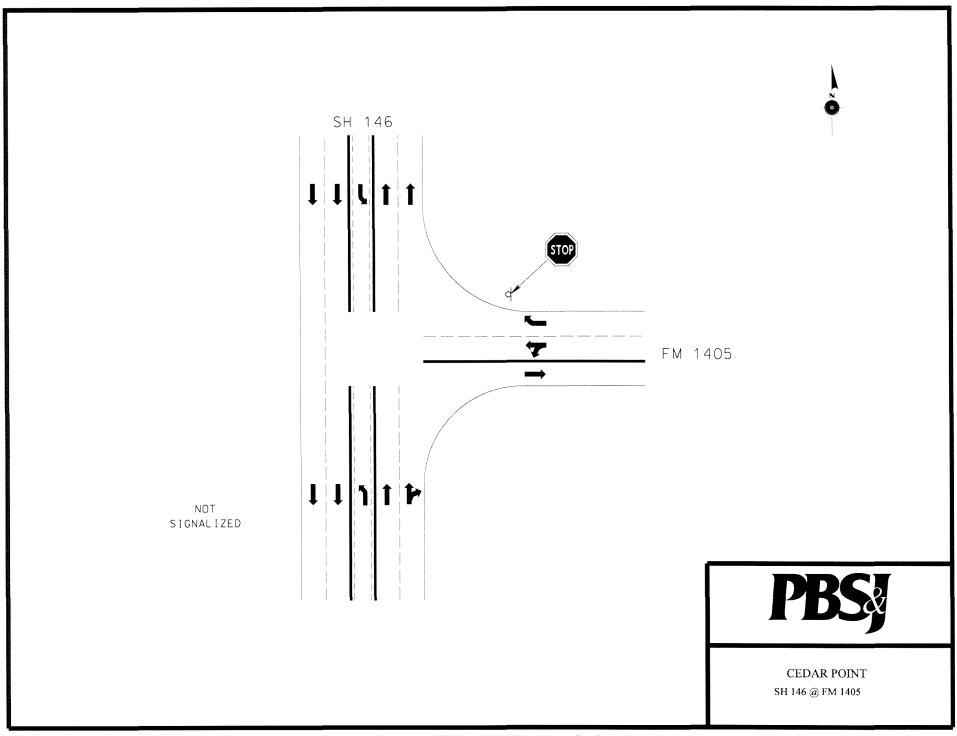


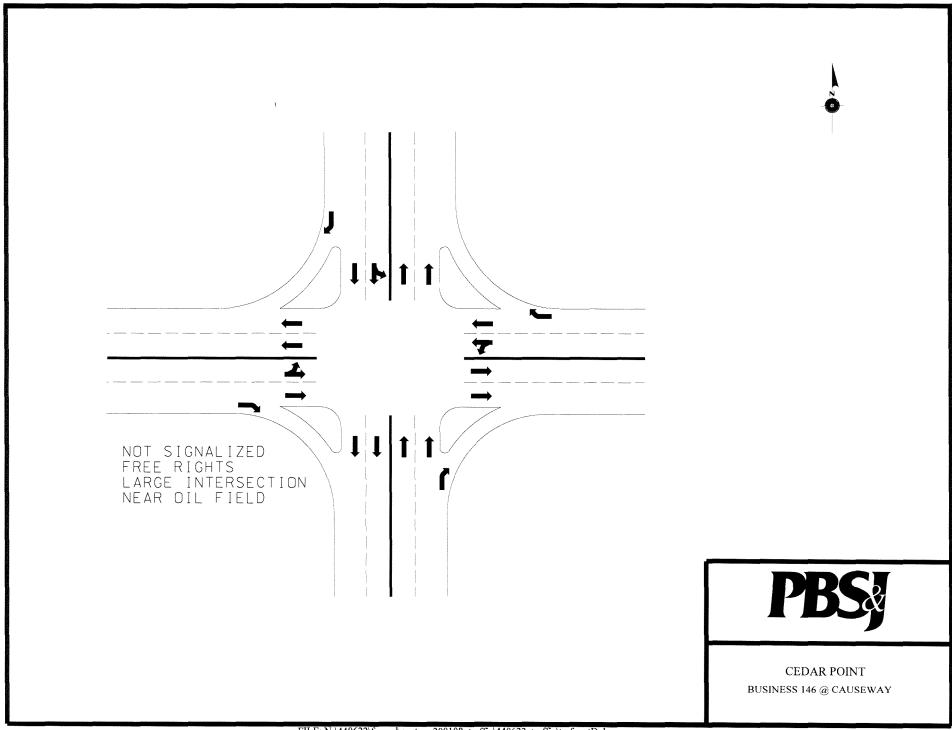


- * 3 WAY STOP SIGN (NORTH INTERSECTION)
- * BRIDGE INTERSECTION
- * DIAMOND INTERSECTION
- * STOP SIGNS AT THE NORTH INTERSECTION
- * FLASHERS AT THE SOUTH INTERSECTION

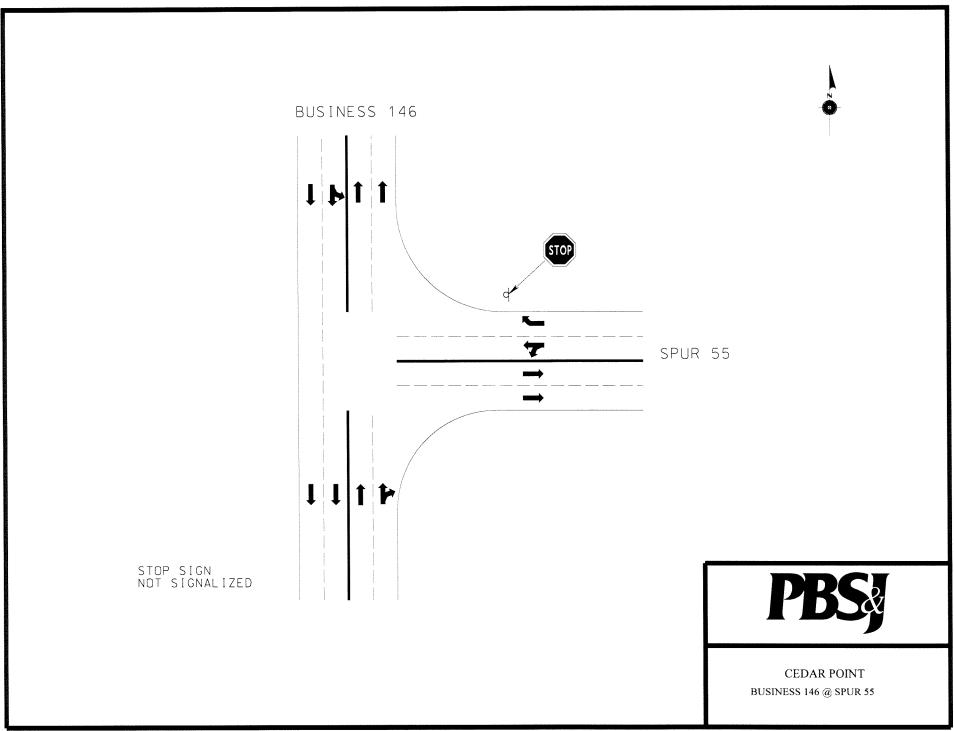


ALEXANDER ISLAND
SH 225 @ MILLERS CUT OFF ROAD





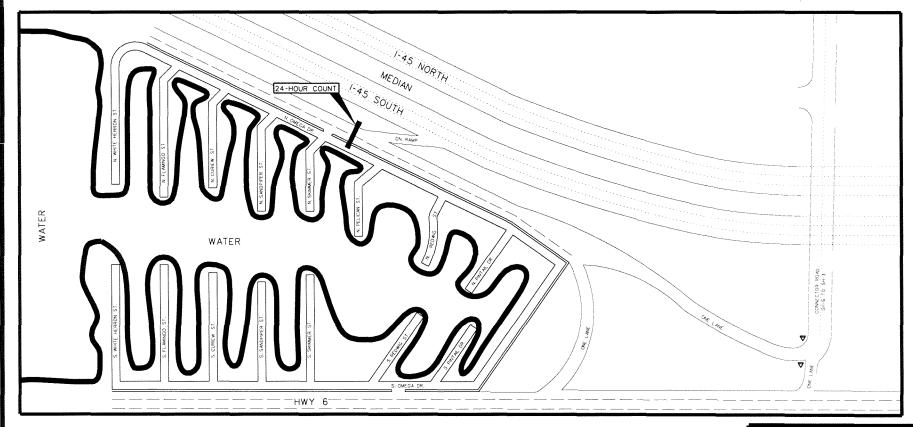
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APPENDIX C-6 IH 45/SH 6 INTERCHANGE OVERVIEW

OMEGA BAY SUBDIVISION OVERVIEW







OMEGA BAY TEXAS CITY

APPENDIX C-7

2022 MTP - TRANSPORTATION IMPROVEMENTS, TEXAS CITY AREA

2022 MTP: TRANSPORTATION IMPROVEMENTS IN PORT OF TEXAS CITY AREA

(Sorted by Street, Co)

PROJ	СО	STREET	FROM LOCATION	TO LOCATION	PROJECT DESCRIPTION	EST LET DATE	PROJ STATUS	TOTAL COST	LEAD AGENCY
		OTTLET	CONTINU	LOOMION					ACCITOT
606	HAR	BAY AREA BLVD - PH 1	FAIRMONT PKWY	SPENCER HWY	CONST 4 LN RD W/ CLT	1/1/08	L	\$6,320,000	CITY OF LA PORTE
527	HAR	BS 146D (LP 410)	FAIRMONT PKWY	SH 146	WIDEN TO 4 LN DIV	5/1/01	L	\$8,200,000	TXDOT
5036	HAR	EL DORADO BLVD	HORSEPEN BAYOU	FM 2351	WIDEN TO 4 LN DIV		L	\$9,231,632	CITY OF HOUSTON
2973	HAR	FAIRMONT PKWY	SH 146	BW 8	WIDEN TO 8 LNS & RECONST AS HWY		L	\$56,443,601	CITY OF LA PORTE
6070	HAR	FAIRMONT PKWY	AT SP RR		CONSTRUCT GSEP		T	\$5,000,000	HARRIS COUNTY
68	HAR	FM 1959	IH 45 (S)	SH 3	WIDEN TO 4 LN UNDIV W/ CLT	1/1/08	S	\$3,000,000	TXDOT
36	GAL	FM 270	FM 518	FM 646	WIDEN TO 4 LN DIV		S	\$5,320,000	CITY OF LEAGUE CITY
39	GAL	FM 517	FM 3436	SH 146	WIDEN TO 4 LN DIV		L	\$4,650,000	GALVESTON COUNTY
41	GAL	FM 518	FM 1266	SH 146	WIDEN TO 4 LN DIV C&G	8/1/02	S	\$3,650,000	TXDOT
42	GAL	FM 518	FM 2094	FM 1266	WIDEN TO 4 LN DIV C&G	8/1/02	S	\$5,800,000	TXDOT
392	GAL	FM 518 B/P	FM 518	FM 270	CONST 4 LN DIV		S	\$6,020,000	CITY OF LEAGUE CITY
4052	GAL	FM 646	1.0 MI E OF SH 146 (N)	SH 146 (N)	WIDEN TO 4 LN DIV	9/1/10	L	\$3,062,000	TXDOT
9274	HAR	GENOA RED BLUFF	BURKE RD	BW 8	WID TO 4 LN DIV CONCRT RD W/C&G & CLT	8/1/10	LET	\$1,831,000	HARRIS COUNTY
6043	GAL	IH 45 S	CLEAR CREEK	FM 517	WIDEN TO 8 MLNS WITH TWO 3 LN FRTG RDS	8/1/10	S	\$43,160,000	TXDOT
6044	GAL	IH 45 S	FM 517	FM 1764	WIDEN TO 8 MLNS WITH TWO 2 LN FRTG RDS	9/1/10	S	\$44,870,000	TXDOT
6046	GAL	IH 45 S	FM 519	TEXAS CITY WYE	WIDEN TO 8 MLNS WITH TWO 2 LN FRTG RDS	8/1/10	S	\$27,240,000	TXDOT
6047	GAL	IH 45 S	TEXAS CITY WYE INTERCHANGE(TCWI)		RECONSTRUCT IH 45/SH 146/SH 3/SH 6 INTERCHANGE	8/1/10	S	\$70,000,000	TXDOT
6045	GAL	IH 45 S	FM 1764	FM 519	WIDEN TO 8 MLNS WITH TWO 2 LN FRTG RDS	8/1/10	S	\$41,710,000	TXDOT
334	HAR	IH 45 S	FM 1959	BAY AREA BLVD	WIDEN TO 10 MLNS WITH 2 HOV LNS & TWO 3 LN FRTG RDS	8/1/05	S	\$42,000,000	TXDOT
6042	HAR	IH 45 S	BAY AREA BLVD	CLEAR CREEK	WIDEN TO 10 MLNS WITH 2 HOV LNS & TWO 3 LN FRTG RDS		S	\$30,380,000	TXDOT
470	HAR	IH 45 S	@ EL DORADO		CONSTRUCT EBOUND BRIDGE	7/1/01	S	\$2,000,000	TXDOT
9998	HAR	JANA LN	FAIRMONT	SPENCER	CONSTRUCT 4 LN CONCRETE BLVD W/ C&G, STORM SEWER	8/1/00	LET	\$2,530,000	HARRIS COUNTY
645	HAR	LP 410	SHOREACRES	PORT RD	CONST 4 LN UNDIV	3/1/02	L	\$6,160,000	TXDOT
349	HAR	MIDDLEBROOK DR	RED BLUFF	BAY AREA BLVD	WIDEN TO 4 LN	1/1/08	L	\$6,300,000	UNDECIDED
389	HAR	N AEROSPACE AVE	CHALLENGER 7 PKWY	PRESTON AVE	CONST 4 LN DIV EXTENSION CONNECTING ELLINGTON FLD INTERIOR W/ BW 8		L	\$6,281,543	CITY OF HOU, DEPT OF AVIATION
6064	HAR	NASA 1	IH 45	FM 528	CONSTRUCT 4 TO 6 LN DIV ON NEW LOCATION		S	\$5,900,000	TXDOT
468	GAL	SH 146	HAR C/L	SH 6 / IH 45 INTERCHANGE	WIDEN & UPGRADE TO 6 LN DIV	8/1/08	L	\$150,000,000	TXDOT
467	GAL	SH 146	0.3 MI S OF FM 519	0.2 MI S OF TCT RR	CONST RR O/P & WIDEN TO 6 LN	6/1/02	T		TXDOT
137	HAR	SH 146	FAIRMONT PKWY	RED BLUFF RD	WIDEN TO 6 M/L	1/1/08	s		TXDOT
138	HAR	SH 146	RED BLUFF	NASA 1	UPGRADE EXISTING RDWY TO 6 LN DIV	1/1/08	S	\$20,000,000	TXDOT
139	HAR	SH 146	NASA RD 1	GAL C/L	WID & UPGRADE TO 6 LN DIV	2	S		TXDOT
45	GAL	SH 3	NCL OF TEXAS CITY	0.33 MI N OF FM 1764	RECONSTRUCT & WIDEN TO 4 MLNS DIV WITH	4/1/01	S	\$6,733,000	TXDOT
393	GAL	SH 96	@ SH 3		RAISED MEDIAN CONST GSEP		L		
595	GAL	5.1.00	© UITU		CONST GSEF		L	\$5,850,000	CITY OF LEAGUE CITY

2022 MTP: TRANSPORTATION IMPROVEMENTS IN PORT OF TEXAS CITY AREA

(Sorted by Street, Co)

PROJ ID 1	co	STREET	FROM LOCATION	TO LOCATION	PROJECT DESCRIPTION	EST LET DATE	PROJ STATUS	TOTAL <u>COST</u>	LEAD AGENCY
394	GAL	SH 96	@ IH 45		CONST GSEP I/C	8/1/03	L	\$5,850,000	CITY OF LEAGUE
395	GAL	SH 96	@ FM 270		CONST GSEP		L	\$5,850,000	CITY OF LEAGUE CITY
396	GAL	SH 99	@ IH 45 (S)		CONST GSEP I/C		L	\$8,380,000	CITY OF LEAGUE CITY
9227	HAR	SPACE CENTER BLVD	EXISTING SPACE CTR BLVD	GENOA-RED BLUFF RD	CONST STANDRD 4 LN CONCRETE BLVD SEC W/ C&G		TLOC	\$7,200,000	HARRIS COUNTY
9235	HAR	TEXAS AVE	NASA RD 1	BAY AREA BLVD	WID 2 TO 4 LN UNDIV		TLOC	\$3,250,000	HARRIS COUNTY
147	HAR	UNDERWOOD DR	FAIRMONT PKWY	RED BLUFF	COMPLETION OF UNDERWOOD DR (4 LN)		S	\$4,830,000	CLEAR LAKE TRANSP PRTNRSHIP

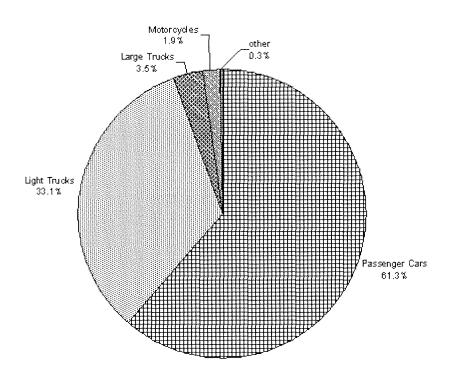
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APPENDIX C-8 NTSB TRUCK AND BUS SAFETY INFORMATION



Vehicles on the Roadways - Public Hearing on Truck & Bus Safety, April 14-16, 1999

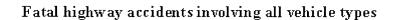
Vehicles Registered in 1997

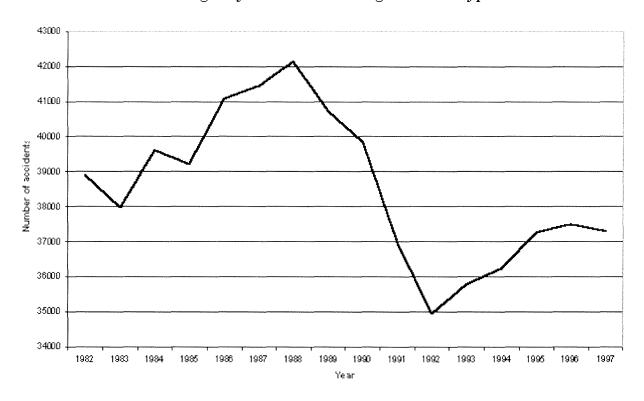


1997 Registered Vehicles

- · Over 7 million large trucks
- · Over 67 million light trucks
- · Over 124 million passenger cars

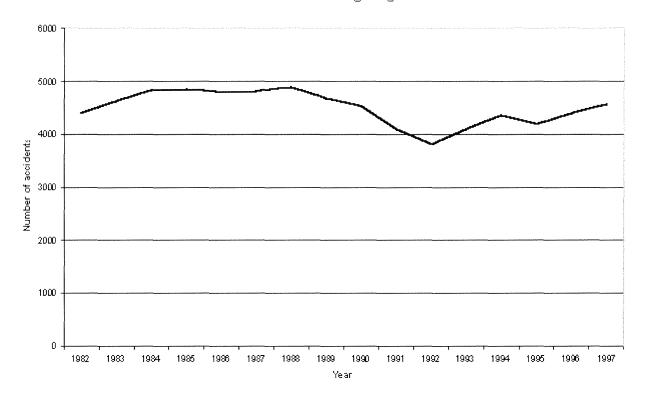
There were over 8 million commercial driver license holders in 1997





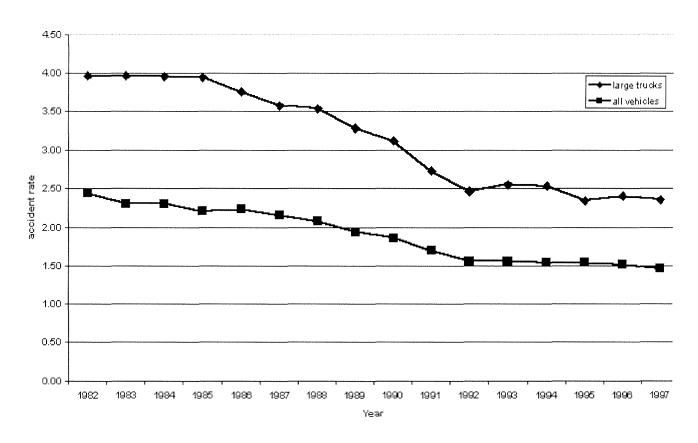
- \cdot In 1997, there were 37,280 fatal accidents on the Nation's highways, down from a high of 42,130 in 1988
- \cdot In that same year, there were more than 2 million injury-only accidents, and more than 4.5 million property damage-only accidents

Fatal accidents involving large trucks



- · In 1997, there were 4,572 fatal accidents involving large trucks
- \cdot The number of fatal accidents involving large trucks has remained below 5,000 per year since 1982

Fatal accident rates per 100 million vehicle miles traveled



- · Between 1982 and 1997, the fatal accident rate for large trucks has fallen by nearly 41 percent
- · In that same period, the overall fatal accident rate has fallen by the same percentage

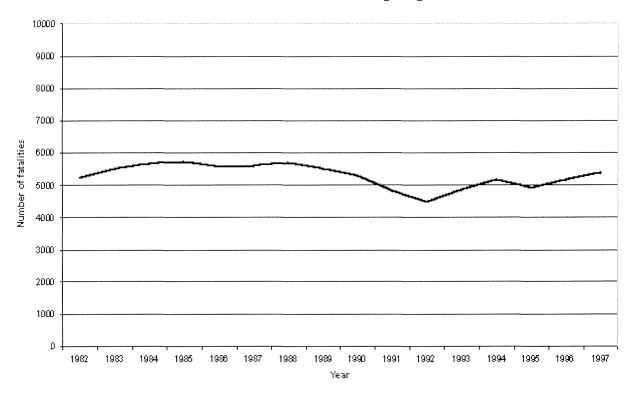
Fatalities

Number of highway fatalities in all vehicle types



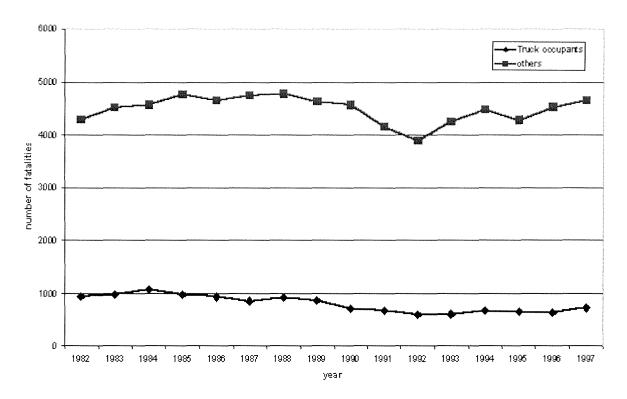
· In 1997, 41,967 people lost their lives on the Nation's roadways

Fatalities from accidents involving large trucks

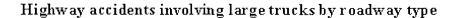


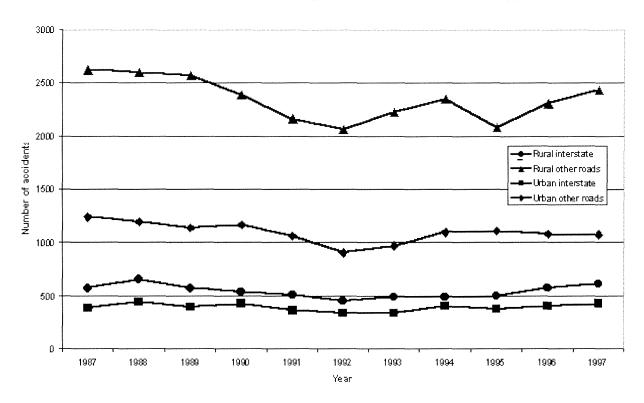
 \cdot 5,355 of the 41,967 highway fatalities in 1997 occurred in accidents involving large trucks

Fatalities from accidents involving large trucks

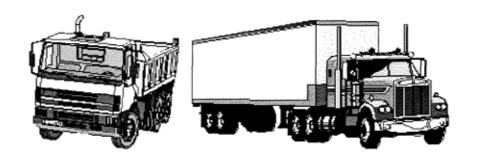


 \cdot In accidents involving large trucks, the occupants of the other vehicles involved have consistently suffered more fatal injuries

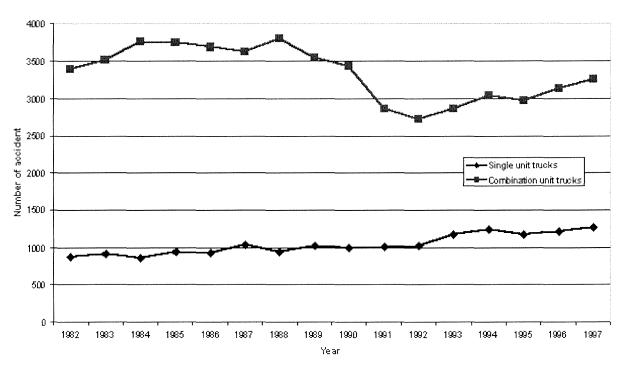




- \cdot The majority of the fatal accidents involving large trucks occur on roads other than interstates
- · The same was true for all fatal highway accidents in 1997; only 4,516 of the 37,820 fatal accidents involving all highway vehicle types occurred on interstates



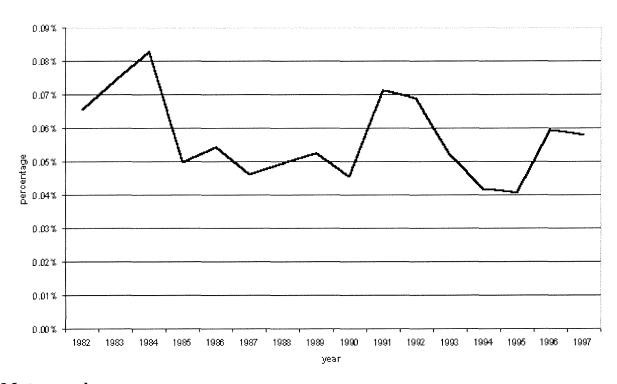
Number of fatal large truck accidents involving single unit and combination unit trucks



Combination unit trucks Single unit trucks

- · In 1996, there were about 5.3 million single-unit trucks, and about 1.7 million combination unit trucks registered
- · Combination unit trucks are involved in more fatal accidents than single unit trucks
- · In 1997, 3,505 combination unit trucks were involved in fatal accidents, and 1,314 single unit trucks

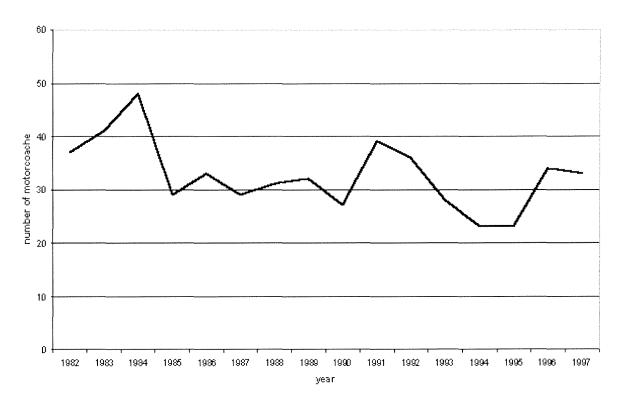
Motorcoaches as a percentage of all vehicles involved in fatal accidents



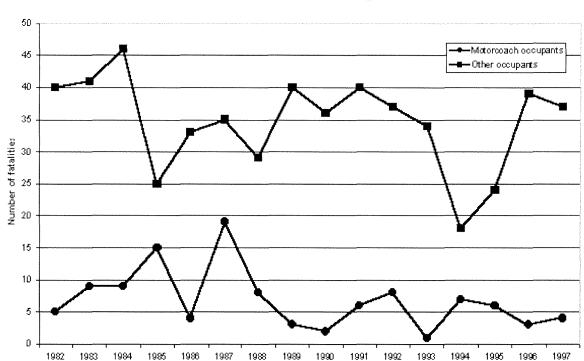
Motorcoaches

 \cdot Motorcoaches account for a small proportion of all vehicles involved in fatal accidents, an average of .06%

Motorcoaches involved in fatal accidents, 1982-1997



- · In general, there are fewer than 40 motorcoaches involved in fatal accidents each year
- · In the last 16 years, 523 motorcoaches have been involved in fatal accidents



Fatalities in accidents involving motor coaches

· Most fatalities in accidents involving motorcoaches are to people other than those in the motorcoaches

Year

· Since 1982, 109 motorcoach occupants have been killed

Notes

For these analyses, large trucks are defined as trucks with a GVWR over 10,000 pounds, and can be categorized as single unit or combination unit trucks. Most "light trucks" are pickups, vans, or utility vehicles.

Sources

National Highway Traffic Safety Administration. November 1998. *Traffic Safety Facts 1997*. Washington, DC.

National Highway Traffic Safety Administration. Fatality Analysis Reporting System, years 1982 through 1997 [database].

Bureau of Transportation Statistics. *National Transportation Statistics 1998*. Washington, DC. (http://www.bts.gov/btsprod/nts/index.html; January 25, 1999.)

APPENDIX D WATER AND ELUTRIATE CONCENTRATIONS DATA

 $\label{eq:Table D-1} \textbf{USACE Water and Elutriate Concentrations ($\mu g/L$) at Texas City Stations}$

Date	Reach	Station	Arse	nic	Bar	ium	Cadn	nium	Chro	nium	Сор	ner	I.e	ad	Mer	curv	Nic	·kel
Date	Reach	Station	Water	Elutriate	Water	Elutriate	Water	Elutriate	Water	Elutriate	Water	Elutriate	Water	Elutriate	Water	Elutriate	Water	Elutriate
	Marine Acı	ite Criteria	149				45.4				13.5		133		2.1		118	
11/17/86	Basin, Turning	0+000	<2.0	<2.0			2.1	2.2	12.7	19.2	3.2	6.4	31.8	32.2	<0.2	<0.2	<5.0	<5.0
11/17/86		5+000	<2.0	<2.0			2.1	<2.0	<10.0	12.7	6.3	3.2	31.7	32.0	<0.2	<0.2	<5.0	<5.0
11/17/86		10+000	<2.0	<2.0			<2.0	<2.0	<10.0	12.7	6.4	6.4	21.3	37.3	<0.2	<0.2	<5.0	<5.0
11/17/86		15+000	<2.0	<2.0			<2.0	2.2	<10.0	13.0	4.7	4.9	26.4	32.6	<0.2	<0.2	<5.0	
11/17/86		20+000	<2.0	<2.0			2.1	<2.0	<10.0	15.1	1.6	5.6	31.8	40.0	<0.2	<0.2	<5.0	<5.0
11/17/86		25+000	<2.0	<2.0			2.1	<2.0	<10.0	12.7	9.6	7.9	32.0	31.9	<0.2	<0.2	<5.0	<5.0
11/17/86		30+000	<2.0	<2.0			2.2	<2.0	15.0	20.2	6.3	8.4	20.0	33.9	<0.2	<0.2	<5.0	<5.0
	Industrial Canal	50+00	<2.0	<2.0			<2.0	<2.0	<10.0	<10.0	<1.0	<1.0	<5.0	<5.0	<0.2	<0.2	<5.0	<5.0
09/01/89		10+000	<2.0	<2.0			<2.0	<2.0	<10.0	<10.0	<1.0	<1.0	<5.0		<0.2	<0.2	<5.0	<5.0
09/01/89	-	15+000	<2.0	<2.0			<2.0	<2.0	<10.0	<10.0	<1.0	<1.0	<5.0	<5.0	<0.2	<0.2	<5.0	
09/01/89		20+000	<2.0	<2.0			<2.0	<2.0	<10.0	<10.0	<1.0	<1.0	<5.0	<5.0	<0.2	<0.2	<5.0	
09/01/89	Channel	25+000	<2.0	<2.0			<2.0	<2.0	<10.0	<10.0	<1.0	<1.0	<5.0	<5.0	<0.2	<0.2	<5.0	<5.0
09/01/89	Channel	30+000	<2.0	<2.0			<2.0	<2.0	<10.0	<10.0	<1.0	<1.0	<5.0	<5.0	<0.2	<0.2	<5.0	<5.0
09/01/89	Channel	35+000	<2.0	<2.0			<2.0	<2.0	<10.0	<10.0	<1.0	<1.0	<5.0	<5.0	<0.2	<0.2	<5.0	<5.0
07/07/92	Basin, Turning	1+000	<2.0	<2.0			<2.0	<2.0	<10.0	<10.0	<1.0	<1.0	<5.0	<5.0	<0.2	<0.2	<5.0	<5.0
07/07/92	Basin, Turning	3+000	<2.0	<2.0			<2.0	<2.0	<10.0	<10.0	<u><1.0</u>	<1.0	<5.0	<5.0	<0.2	<0.2	<5.0	<5.0
07/07/92		5+000	<2.0	<2.0			<2.0	<2.0	<10.0	<10.0	<1.0	<1.0	<5.0	<5.0	<0.2	<0.2	<5.0	<5.0
07/07/92	Channel	10+000	<2.0	<2.0			<2.0	<2.0	<10.0	<10.0	<1.0	<1.0	<5.0	<5.0	<0.2	<0.2	<5.0	<5.0
07/07/92	Channel	15+000	<2.0	<2.0			<2.0	<2.0	<10.0	<10.0	<1.0	<1.0	<5.0	<5.0	<0.2	<0.2	<5.0	<5.0
07/07/92	Ind. Canal & T.B.	18+00	<2.0	<2.0			<2.0	<2.0	<10.0	<10.0	<1.0	<1.0	<5.0	<5.0	<0.2	<0.2	<5.0	<5.0
07/07/92	Channel	20+000	<2.0	<2.0			<2.0	<2.0	<10.0	<10.0	<1.0	<1.0	<5.0	<5.0	<0.2	<0.2	<5.0	<5.0
07/07/92	Channel	25+000	<2.0	<2.0			<2.0	<2.0	<10.0	<10.0	<1.0	<1.0	<5.0	<5.0	<0.2	<0.2	<5.0	<5.0
07/07/92		30+000	<2.0	<2.0			<2.0	<2.0	<10.0	<10.0	<1.0	<1.0	<5.0	<5.0	<0.2	<0.2	<5.0	<5.0
07/07/92		35+000	<2.0	<2.0			<2.0	<2.0	<10.0	<10.0	<1.0	<1.0	<5.0	<5.0	<0.2	<0.2	<5.0	<5.0
	Industrial Canal	50+00	<2.0	<2.0			<2.0	<2.0	<10.0	<10.0	<1.0	<1.0	<u><5.0</u>	<5.0	<0.2	<0.2	<5.0	
1	Industrial Canal	85+00	<2.0	<2.0			<2.0	<2.0	<10.0	<10.0	<1.0	<1.0	<5.0	<5.0	<0.2	<0.2	<5.0	<5.0
08/31/95		1+000	<1.0	<1.0	38.6	48.9	<0.10	<0.10	<1.0	<1.0	<u><1.0</u>	<1.0	<1.0	<1.0	<0.2	<0.2	<1.0	
08/31/95		3+000	<u><1.0</u>	<1.0	<u>39.6</u>	49.5	<0.10	<0.10	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.2	<0.2	<1.0	
08/31/95		5+000	<1.0	<1.0	38.1	41.5	<0.10	<0.10	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<u><0.2</u>	<0.2	<1.0	
08/31/95		10+000	<1.0	<1.0	37.2		<0.10	<0.10	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.2	<0.2	<1.0	
08/31/95		15+000	<1.0	<1.0	37.7	45.5	<u><0.10</u>	<0.10	<1.0	<1.0	<1.0	<1.0	<1.0		<0.2	<0.2	<1.0	
08/31/95		20+000	<u><1.0</u>	<1.0	34.9		<0.10	<0.10	<1.0	<1.0	<1.0	<1.0	<1.0		<0.2	<0.2	<1.0	
08/31/95		25+000	<1.0	<1.0	37.8		<0.10	<0.10	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<u><0.2</u>	<0.2	<1.0	
08/31/95		30+000	<1.0	<1.0	36.3		<0.10	<0.10	<1.0	<1.0	<1.0	<u><1.0</u>	<1.0		<0.2	<0.2	<1.0	
-	Basin, Turning	1+000	1.93	3.73	34.1	67.7	0.22	0.23	<1.00	<1.00	2.14	<1.00	<1.00	<1.00	<0.20	<0.20	<1.00	
	Basin, Turning	3+000	<1.00	1.03	33.4	73.5	0.11	0.10	<1.00	<1.00	14.20	<1.00	<1.00	<1.00	<0.20	<0.20	<1.00	
01/29/98		5+000	<1.00	4.03	31.2		0.11	0.35	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<0.20	<0.20	<1.00	
01/29/98		10+000	<1.00	3.43	33.4		1.37	0.16	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<0.20	<0.20	<1.00	
01/29/98		<u>15+000</u>	<1.00	1.63	34.0		0.49	0.27	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<0.20	<0.20	<1.00	
	Ind. Canal & T.B.		1.63	1.33	29.9		0.67	0.34	5.91	1.90	43.00	<1.00	<1.00	<1.00	<0.20	0.59	<1.00	
01/29/98		20+000	1.93	1.63	33.9 32.7	82.1 91.7	0.48	0.45	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<0.20	<0.20	<1.00	<1.00
01/29/98 01/29/98		25+000	2.53	<1.00 4.03	32.7		0.58	0.54	1.19	<1.00 <1.00	<1.00 <1.00	<1.00	<1.00	<1.00	0.31	<0.20	<1.00	
01/29/98		30+000	2.23	1.63	33.5 39.1		1.15	0.54	<1.00			<1.00	<1.00	<1.00	<0.20	<0.20	<1.00	
	Industrial Canal	35+000 50+00	2.23 3.43	3.43	39.1		0.76 0.93	0.32 0.84	<1.00 3.21	<1.00 <1.00	<1.00 23.10	<1.00 <1.00	<u><1.00</u> <1.00	<1.00	<0.20	<0.20	<1.00	
	Industrial Canal	85+00	3.43	4.03	30.2		0.93	1.68	3.21	<1.00	8.20	<1.00	<1.00 <1.00	<1.00 <1.00	<0.20	0.35	<1.00	
0 1/23/30	muusulai Callai	03700	ა. 13	4.03	30.0	03.0	0.30	1.00	3.40	~1.00]	0.20	×1.00	\1.00	\1.00	<0.20	0.20	<1.00	<1.00

Table D-1 USACE Water and Elutriate Concentrations (µg/L) at Texas City Stations

Date	Reach	Station	Silv	ver	Seler	ium	Zi	nc.	ТО	C	Total	PCB	4,4'-	DDT	Chlor	dane	Toxa	nhene
20			Water	Elutriate	Water	Elutriate	Water	Elutriate	Water	Elutriate	Water	Elutriate	Water	Elutriate	Water	Elutriate	Water	Elutriate
	Marine Acu	te Criteria	2		564	1	92.7			ĺ	10	İ	0.13		0.09	-	0.21	
11/17/86	Basin, Turning	0+000			<2.0	<2.0	36.8	10.2			<0.5	<0.5	<0.02	<0.02	<0.02	<0.02	<0.5	<0.5
11/17/86		5+000			<2.0	<2.0	26.7	8.4			<0.5	<0.5	<0.02	<0.02	<0.02	<0.02	<0.5	<0.5
11/17/86	Channel	10+000			<2.0	<2.0	60.5	8.4			<0.5	<0.5	<0.02	<0.02	<0.02	<0.02	<0.5	<0.5
11/17/86	Channel	15+000			<2.0	<2.0	100	<5.0			<0.5	<0.5	<0.02	<0.02	<0.02	<0.02	<0.5	<0.5
11/17/86	Channel	20+000			<2.0	<2.0	<5.0	13.3			<0.5	<0.5	<0.02	<0.02	< 0.02	<0.02	<0.5	<0.5
11/17/86	Channel	25+000			<2.0	<2.0	70.6	13.4			<0.5	<0.5	<0.02	<0.02	<0.02	<0.02	<0.5	<0.5
11/17/86	Channel	30+000			<2.0	<2.0	86.7	24.9			<0.5	<0.5	<0.02	<0.02	<0.02	<0.02	<0.5	<0.5
04/20/87	Industrial Canal	50+00			<2.0	<2.0	29.9	8.1			<0.5	<0.5	<0.02	<0.02	<0.02	<0.02	<0.5	<0.5
09/01/89	Channel	10+000			<2.0	<2.0	<5.0	<u><5.0</u>			<0.5	<0.5	<0.02	<0.02	<0.02	<0.02	<0.5	<0.5
09/01/89	Channel	15+000			<2.0	<2.0	<5.0	<5.0			<0.5	<0.5	<0.02	<0.02	<0.02	<0.02	<0.5	<0.5
09/01/89	Channel	20+000			<2.0	<2.0	<5.0	<5.0			<0.5	<0.5	<0.02	<0.02	<0.02	<0.02	<0.5	<0.5
09/01/89	Channel	25+000			<2.0	<2.0	<5.0	<5.0			<0.5	<0.5	<0.02	<0.02	<0.02	<0.02	<0.5	<0.5
09/01/89		30+000			<2.0	<2.0	<5.0	<u><5.0</u>			<0.5	<0.5	<0.02	<0.02	<0.02	<0.02	<0.5	<0.5
09/01/89	Channel	35+000			<2.0	<2.0	<5.0	<5.0			<0.5	<0.5	<0.02		<0.02	<0.02	<0.5	<0.5
07/07/92	Basin, Turning	1+000			<2.0	<2.0	<5.0	24.0	11.50	10.00	<0.5	<0.5	<0.02	<0.02	<0.02	<0.02	<0.5	<0.5
	Basin, <u>Turning</u>	3+000			<u><2.0</u>	<2.0	<5.0	12.0	9.20	10.50	<0.5	<0.5	<0.02	<0.02	<0.02	<0.02	<0.5	<0.5
07/07/92		5+000		. CALLES AND AND AND AND AND AND AND AND AND AND	<2.0	<2.0	7.0	31.0	12.70	26.00	<0.5	<0.5	<0.02	<0.02	<0.02	<0.02	<0.5	<0.5
07/07/92		10+000			<2.0	<2.0	8.0	37.0	<u>12.00</u>	11.40	<0.5	<0.5	<0.02	<0.02	<0.02	<0.02	<0.5	<0.5
07/07/92		15+000			<2.0	<2.0	<5.0	<u>25.0</u>	11.50	13.30	<u><0.5</u>	<0.5	<0.02	<0.02	<0.02	<0.02	<0.5	<0.5
	Ind. Canal & T.B.	18+00			<2.0	<2.0	<5.0	<5.0	11.20	7.70	<0.5	<0.5	<0.02	<0.02	<0.02	<0.02	<0.5	<0.5
07/07/92		20+000			<2.0	<2.0	13.0	10.0	8.20	12.50	<0.5	<0.5	<0.02	<0.02	<0.02	<0.02	<0.5	<0.5
07/07/92		25+000			<2.0	<2.0	11.0	<5.0	14.30	13.30	<0.5	<0.5	<0.02	<0.02	<0.02	<0.02	<0.5	<0.5
07/07/92		30+000			<2.0	<2.0	55.0	<5.0	12.80	13.00	<0.5	<0.5	<0.02	<0.02	<0.02	<0.02	<0.5	<0.5
07/07/92		<u>35+000</u>			<2.0	<2.0	25.0	9.0	12.90	11.00	<0.5	<0.5	<0.02	<0.02	<0.02	<0.02	<0.5	<0.5
	Industrial Canal	50+00			<u><2.0</u>	<2.0	<5.0	31.0	12.40	11.60	<0.5	<0.5	<0.02	<0.02	<0.02	<0.02	<0.5	<0.5
	Industrial Canal	85+00	-4.0		<2.0	<2.0 <2.0	<5.0	<5.0	10.80	33.00	<0.5	<0.5	<0.02	<0.02	<0.02	<0.02	<0.5	<0.5
08/31/95		1+000	<1.0 <1.0	<1.0	<2.0		<1.0	<1.0	24.60	29.80	<0.50	<0.50	<0.12	<0.12	<0.14	<0.14	<0.50	< 0.50
08/31/95 08/31/95		3+000 5+000		<1.0 <1.0	<2.0 <2.0	<2.0 <2.0	<1.0 <1.0	<1.0 <1.0	13.80 11.90	15.60 17.02	<0.50 <0.50	<0.50 <0.50	<0.12 <0.12	<0.12 <0.12	<0.14	<0.14	< 0.50	<0.50
08/31/95		10+000	<1.0 <1.0	<1.0	<2.0	<2.0	<1.0	<1.0	15.67	16.35	<0.50	<0.50	<0.12		<0.14	<0.14 <0.14	<0.50	<0.50
08/31/95		15+000	<1.0	<1.0	<2.0 <2.0	<2.0	<1.0	<1.0	8.30	12.98	<0.50	<0.50	<0.12	<0.12	<0.14 <0.14	<0.14	<0.50 <0.50	<0.50 <0.50
08/31/95		20+000	<1.0	<1.0	<2.0	<2.0	<1.0	<1.0	6.62	10.47	<0.50	<0.50	<0.12	<0.12	<0.14	<0.14	<0.50	<0.50
08/31/95		25+000	<1.0	<1.0	<2.0	<2.0	<1.0	<1.0	8.71	11.01	<0.50	<0.50	<0.12	<0.12	<0.14	<0.14	<0.50	<0.50
08/31/95	~	30+000	<1.0	<1.0	<2.0	<2.0	<1.0	<1.0	7.94	14.69	<0.50	<0.50	<0.12	<0.12	<0.14	<0.14	<0.50	<0.50
	Basin, Turning	1+000	<1.00	<1.00	<1.00	<1.00	3.4	<1.0	4.99	4.23	<0.01	<0.01	<0.12	<0.12	<0.14	<0.14	<0.50	<0.50
	Basin, Turning	3+000	<1.00	₹1.00	<1.00	1.04	12.8	1.7	5.14	4.19	<0.01	<0.01	<0.10	<0.10	<0.14	<0.14	<0.50	<0.50
01/29/98		5+000	<1.00	<1.00	<1.00	<1.00	<1.0	2.1	4.97	3.89	<0.01	<0.01	<0.10	<0.10	<0.14	<0.14	<0.50	<0.50
01/29/98		10+000	<1.00	<1.00	<1.00	<1.00	<1.0	1.8	5.11	3.95	<0.01	<0.01	<0.10	<0.10	<0.14	<0.14	<0.50	<0.50
01/29/98		15+000	<1.00	<1.00	<1.00	<1.00	<1.0	<1.0	4.85	3.76	<0.01	<0.01	<0.10		<0.14	<0.14	<0.50	<0.50
	Ind. Canal & T.B.		<1.00	<1.00	<1.00	1.04	39.6	<1.0	5.01	4.12	<0.01	<0.01	<0.10		<0.14	<0.14	<0.50	<0.50
01/29/98		20+000	<1.00	<1.00	<1.00	<1.00	2.9	2.0	4.99	3.56	<0.01	<0.01	<0.10	<0.10	<0.14	<0.14	<0.50	<0.50
01/29/98		25+000	<1.00	<1.00	<1.00	1.87	3.0	1.9	4.93	5.38	<0.01	<0.01	<0.10	<0.10	<0.14	<0.14	<0.50	<0.50
01/29/98		30+000	<1.00	<1.00	<1.00	<1.00	6.3	1.4	4.92	5.03	<0.01	<0.01	<0.10	<0.10	<0.14	<0.14	<0.50	<0.50
01/29/98		35+000	<1.00	<1.00	<1.00	<1.00	1.4	1.1	5.06	4.86	<0.01	<0.01	<0.10	<0.10	<0.14	<0.14	<0.50	<0.50
	Industrial Canal	50+00	<1.00	<1.00	<1.00	1.04	25.7	<1.0	4.85	4.22	<0.01	<0.01	<0.10	<0.10	<0.14	<0.14	<0.50	<0.50
	Industrial Canal	85+00	<1.00	<1.00	<1.00	<1.00	7.8	7.1	5.17	4.28	<0.01	<0.01	<0.10	<0.10	<0.14	<0.14	<0.50	<0.50

 $Table \ D\text{-}1 \\ USACE \ Water \ and \ Elutriate \ Concentrations \ (\mu g/L) \ at \ Texas \ City \ Stations$

Date	Reach	Station	Total	PAH	Naphtl	halene	Acenap	hthene	Fluora	nthene	Benzo(a)pyrene	Benzo(e)pyrene	Acenapl	ithylene	Fluo	rene
			Water	Elutriate	Water	Elutriate	Water	Elutriate	Water	Elutriate	Water	Elutriate	Water	Elutriate	Water	Elutriate	Water	Elutriate
	Marine Acu	te Criteria																
		0+000	<2.5	<2.5	<2.0	<2.0	<2.0	<2.0	<0.5		<0.5							
11/17/86		5+000	<2.5	<2.5	<2.0	<2.0	<2.0	<2.0	<u><0.5</u>	<0.5	<u><0.5</u>							
11/17/86		<u>10+000</u>	<2.5	<2.5	<2.0	<2.0	<2.0	<2.0	<0.5	<0.5	<0.5							
11/17/86	Channel	15+000	<2.5	<2.5	<2.0	<2.0	<2.0	<2.0	<0.5	<0.5	<0.5	<u><0.5</u>						
11/17/86		20+000	<2.5	<2.5	<2.0	<2.0	<2.0	<2.0	<0.5	<0.5	<0.5	<0.5						
11/17/86		<u>25+000</u>	<2.5	<2.5	<2.0	<2.0	<2.0	<2.0	<0.5	<0.5	<0.5	<0.5				***************************************		
11/17/86	Channel	30+000	<2.5	<2.5	<2.0	<2.0	<2.0	<2.0	<0.5	<0.5	<0.5	<0.5						
04/20/87	Industrial Canal	50+00	<2.5	<2.5	<2.0	<2.0	<2.0	<2.0	<0.5	<0.5	<0.5	<0.5				:		
09/01/89	Channel	10+000	<5.0	<5.0	<2.0	<2.0	<2.0	<2.0	<0.5	<0.5	<0.5	<0.5			<2.5	<2.5	<0.5	<0.5
09/01/89	Channel	<u>15+000</u>	<u><5.0</u>	<5.0	<2.0	<2.0	<2.0	<2.0	<0.5	<0.5	<0.5	<0.5			<2.5	<2.5	<0.5	<0.5
09/01/89	Channel	20+000	<5.0	<5.0	<2.0	<2.0	<2.0	<2.0	<u><0.5</u>	<0.5	<0.5	<0.5			<2.5	<2.5	<0.5	<0.5
09/01/89	Channel	25+000	<5.0	<5.0	<2.0	<2.0	<2.0	<2.0	<0.5	<0.5	<0.5	<0.5			<2.5	<2.5	<0.5	<0.5
09/01/89	Channel	30+000	<5.0	<5.0	<2.0	<2.0	<2.0	<u><2.0</u>	<0.5	<0.5	<0.5	<0.5			<2.5	<2.5	<0.5	<0.5
09/01/89	Channel	35+000	<5.0	<5.0	<2.0	<2.0	<u><2.0</u>	<2.0	<u><0.5</u>	<0.5	<0.5	<0.5			<2.5	<2.5	<0.5	<0.5
07/07/92	Basin, Turning	1+000	<5.0	<5.0	<2.0	<2.0	<2.0	<2.0	<0.5	<0.5	<0.5	<0.5			<2.5	<2.5	< 0.50	<0.50
07/07/92	Basin, <u>Turning</u>	3+000	<5.0	<u><5.0</u>	<2.0	<2.0	<2.0	<2.0	<0.5	<0.5	<0.5	<0.5			<2.5	<2.5	<0.50	<0.50
07/07/92	Channel	5+000	<5.0	<5.0	<2.0	<2.0	<u><2.0</u>	<2.0	<0.5	<0.5	<0.5	<0.5			<2.5	<2.5	<0.50	<0.50
07/07/92	Channel	10+000	<5.0	<5.0	<2.0	<2.0	<2.0	<2.0	<0.5	<0.5	<0.5	<0.5			<2.5	<2.5	<0.50	<0.50
07/07/92	Channel	15+000	<5.0	<5.0	<2.0	<2.0	<2.0	<2.0	<0.5	<0.5	<0.5	<0.5			<2.5	<2.5	<0.50	<0.50
07/07/92	Ind. Canal & T.B.	18+00	<5.0	<5.0	<2.0	<2.0	<u><2.0</u>	<2.0	<0.5	<0.5	<0.5	<0.5			<2.5	<2.5	<0.50	<0.50
07/07/92	Channel	20+000	<5.0	<5.0	<2.0	<2.0	<2.0	<2.0	<u><0.5</u>	<0.5	<0.5	<0.5			<2.5	<2.5	<0.50	<0.50
07/07/92	Channel	25+000	<5.0	<5.0	<2.0	<2.0	<2.0	<2.0	<0.5	<0.5	<0.5	<0.5			<2.5	<2.5	<0.50	<0.50
07/07/92	Channel	30+000	<5.0	<5.0	<2.0	<2.0	<2.0	<2.0	<0.5	<0.5	<0.5	<0.5			<2.5	<2.5	<0.50	<0.50
07/07/92		35+000	<5.0	<5.0	<2.0	<2.0	<2.0	<2.0	<0.5	<0.5	<0.5	<0.5			<2.5	<2.5	<0.50	<0.50
07/07/92	Industrial Canal	50+00	<5.0	<5.0	<2.0	<2.0	<u><2.0</u>	<2.0	<0.5	<0.5	<0.5	<0.5			<2.5	<2.5	<0.50	<0.50
07/07/92	Industrial Canal	85+00	<5.0	<5.0	<2.0	<2.0	<2.0	<2.0	<0.5	<0.5	<0.5	<0.5			<2.5	<2.5	<0.50	<0.50
08/31/95	<u>Channel</u>	<u>1+000</u>	<5.00	<5.00	<2.0	<2.0	<2.0	<2.0	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50		VI 10000		
08/31/95	Channel	3+000	<5.00	<5.00	<2.0	<2.0	<2.0	<2.0	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50				
08/31/95	Channel	5+000	<5.00	<5.00	<2.0	<2.0	<2.0	<2.0	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50				
08/31/95	Channel	<u>10+000</u>	<5.00	<5.00	<2.0	<2.0	<2.0	<2.0	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50				
08/31/95	Channel	15+000	<5.00	<5.00	<2.0	<u><2.0</u>	<2.0	<2.0	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50		~~		
08/31/95	Channel	20+000	<5.00	<5.00	<2.0	<2.0	<2.0	<u><2.0</u>	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50				
08/31/95	Channel	25+000	<5.00	<5.00	<2.0	<2.0	<u><2.0</u>	<2.0	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50				
08/31/95	Channel	30+000	<5.00	<5.00	<2.0	<2.0	<2.0	<2.0	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50				
01/29/98	Basin, Turning	1+000	<0.01	<0.01	<2.00	<2.00	<2.00	<2.00	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<2.5	<2.5	<0.50	<0.50
01/29/98	Basin, Turning	3+000	<0.01	<0.01	<2.00	<2.00	<2.00	<2.00	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<2.5	<2.5	<0.50	<0.50
01/29/98		5+000	<0.01	<0.01	<2.00	<2.00	<2.00	<2.00	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<2.5	<2.5	<0.50	<0.50
01/29/98	<u>Channel</u>	10+000	<u><0.01</u>	<0.01	<2.00	<2.00	<2.00	<2.00	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<2.5	<2.5	<0.50	<0.50
01/29/98	Channel	15+000	<0.01	<0.01	<2.00	<2.00	<2.00	<2.00	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<2.5	<2.5	<0.50	<0.50
01/29/98	Ind. Canal & T.B.	18+00	<0.01	<0.01	<2.00	<2.00	<2.00	<2.00	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<2.5	<2.5	<0.50	<0.50
01/29/98		20+000	<0.01	<0.01	<2.00	<2.00	<2.00	<2.00	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<2.5	<2.5	<0.50	<0.50
01/29/98	Channel	25+000	<0.01	<0.01	<2.00	<2.00	<2.00	<2.00	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<2.5	<2.5	<0.50	<0.50
01/29/98		30+000	<0.01	<0.01	<2.00	<2.00	<2.00	<2.00	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<2.5	<2.5	<0.50	<0.50
01/29/98		35+000	<0.01	<0.01	<2.00	<2.00	<2.00	<2.00	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<2.5	<2.5	<0.50	<0.50
		50+00	<0.01	<0.01	<2.00	<2.00	<2.00	<2.00	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<2.5	<2.5	<0.50	<0.50
		85+00	<0.01	<0.01	<2.00	<2.00	<2.00	<2.00	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<2.5	<2.5 <2.5	<0.50	<0.50
			0.01	5.51	2.50	2.50	-2.50	-2.00	-0.00	-0.00	-0.00	-0.50	٠٥.٥٥	~0.50	~2.5	~2.5	~0.50	<u>~∪.5</u> L

 $\label{eq:Table D-1} \textbf{USACE Water and Elutriate Concentrations } (\mu g/L) \ \text{at Texas City Stations}$

Date	Reach	Station	Phenan	threne	Anthr	acene	Pyr	ene	Benzo(a)an	thracene	Chry	sene	Benzo(b)flu	oranthene	Benzo(k)flu	ioranthene
			Water	Elutriate	Water	Elutriate	Water	Elutriate	Water	Elutriate	Water	Elutriate	Water	Elutriate	Water	Elutriate
	Marine Acu	te Criteria	7.7										and the same of th			
11/17/86	Basin, Turning	0+000														
11/17/86		5+000														
11/17/86		10+000												***************************************		
11/17/86	Channel	15+000														
11/17/86		20+000														
11/17/86	Channel	25+000								***************************************						
11/17/86	Channel	30+000												Total Committee of the		
04/20/87	Industrial Canal	50+00				1										
09/01/89	Channel	10+000	<1.0	<1.0	<1.0	<1.0	<0.5	<0.5	<1.0	<1.0	<0.5	<0.5	<0.1	<0.1	<0.1	<0.
09/01/89	Channel	15+000	<1.0	<1.0	<1.0	<1.0	<0.5	<0.5	<1.0	<1.0	<0.5	<0.5	<0.1	<0.1	<0.1	<0.7
09/01/89	Channel	20+000	<1.0	<1.0	<1.0	<1.0	<0.5	<0.5	<1.0	<1.0	<0.5	<0.5	<0.1	<0.1	<0.1	<0.1
09/01/89	Channel	25+000	<1.0	<1.0	<1.0	<1.0	<0.5	<0.5	<1.0	<1.0	<0.5	<0.5	<0.1	<0.1	<0.1	<0.1
09/01/89	Channel	30+000	<1.0	<1.0	<1.0	<1.0	<0.5	<0.5	<1.0	<1.0	<0.5	<0.5	<0.1	<0.1	<0.1	<0.
09/01/89	Channel	35+000	<1.0	<1.0	<u><1.0</u>	<1.0	<0.5	<0.5	<1.0	<1.0	<0.5	<0.5	<0.1	<0.1	<0.1	<0.1
07/07/92	Basin, Turning	1+000	<1.0	<1.0	<1.0	<1.0	<0.50	<0.50	<1.0	<1.0	<0.50	<0.50	<0.10	<0.10	<0.10	<0.10
07/07/92	Basin, Turning	3+000	<1.0	<1.0	<1.0	<1.0	<0.50	<0.50	<1.0	<1.0	<0.50	<0.50	<0.10	<0.10	<0.10	<0.10
07/07/92	Channel	5+000	<1.0	<1.0	<1.0	<1.0	<0.50	<0.50	<1.0	<1.0	<0.50	< 0.50	<0.10	<0.10	<0.10	<0.10
07/07/92	Channel	10+000	<1.0	<1.0	<1.0	<1.0	<0.50	<0.50	<1.0	<1.0	<0.50	<0.50	<0.10	<0.10	<0.10	<0.10
07/07/92	Channel	15+000	<1.0	<1.0	<1.0	<1.0	<0.50	<0.50	<1.0	<1.0	<0.50	<0.50	<0.10	<0.10	<0.10	<0.10
07/07/92	Ind. Canal & T.B.	18+00	<1.0	<1.0	<1.0	<1.0	<0.50	< 0.50	<1.0	<1.0	<0.50	<0.50	<u><0.10</u>	<0.10	<0.10	<0.10
07/07/92	Channel	20+000	<1.0	<1.0	<1.0	<1.0	<0.50	<u><0.50</u>	<1.0	<1.0	<0.50	<0.50	<0.10	<0.10	<0.10	<0.10
07/07/92	Channel	25+000	<1.0	<1.0	<1.0	<1.0	<0.50	<0.50	<1.0	<1.0	<0.50	<0.50	<0.10	<0.10	<0.10	<0.10
07/07/92	Channel	30+000	<1.0	<1.0	<1.0	<1.0	<0.50	<0.50	<1.0	<1.0	<0.50	<0.50	<0.10	<0.10	<0.10	<0.10
07/07/92	Channel Channel	<u>35+000</u>	<u><1.0</u>	<1.0	<1.0	<1.0	<u><0.50</u>	<0.50	<1.0	<1.0	<0.50	<u><0.50</u>	<0.10	<0.10	<0.10	<0.10
07/07/92	Industrial Canal	50+00	<1.0	<1.0	<1.0	<1.0	<0.50	<0.50	<1.0	<1.0	<u><0.50</u>	<0.50	<u><0.10</u>	<0.10	<0.10	<0.10
	Industrial Canal	85+00	<1.0	<1.0	<u><1.0</u>	<1.0	<u><0.50</u>	<0.50	<1.0	<1.0	<0.50	<0.50	<0.10	<0.10	<0.10	<0.10
08/31/95		1+000														
08/31/95	<u> </u>	3+000	.,,					\								
08/31/95		5+000									A					
0 <u>8/31/95</u>		10+000														
08/31/95		15+000														
08/31/95		20+000														
08/31/95		25+000														
08/31/95		30+000														
	Basin, Turning	1+000	<1.0	<1.0	<0.50	<0.50	<0.50	<0.50	<1.0	<1.0	<u><0.50</u>	<0.50	<0.10	<0.10	<0.10	<0.10
	Basin, Turning	3+000	<1.0	<1.0	<0.50	<0.50	<0.50	<0.50	<1.0	<1.0	<0.50	<0.50	<0.10	<0.10	<0.10	<0.10
01/29/98		5+000	<u><1.0</u>	<1.0	<0.50	<u><0.50</u>	<0.50	<0.50	<1.0	<1.0	<0.50	<0.50	<u><0.10</u>	<0.10	<0.10	<0.10
01/29/98		10+000	<1.0	<1.0	<0.50	<0.50	<0.50	<0.50	<1.0	<1.0	<0.50	<0.50	<0.10	<0.10	<0.10	<0.10
01/29/98		<u>15+000</u>	<1.0	<1.0	<0.50	<0.50	<0.50	<0.50	<1.0	<1.0	<0.50	<0.50	<0.10	<u><0.10</u>	<0.10	<0.10
	Ind, Canal & T.B.	·	<1.0	<1.0	<0.50	<0.50	<0.50	<0.50	<1.0	<1.0	<0.50	<u><0.50</u>	<0.10	<0.10	<0.10	<0.10
01/29/98	ACADOMINATE AND THE PARTY OF TH	20+000	<1.0	<1.0	<0.50	<0.50	<0.50	<0.50	<1.0	<1.0	<0.50	<0.50	<0.10	<0.10	<0.10	<0.10
01/29/98		25+000	<1.0	<u><1.0</u>	<u><0.50</u>	<0.50	<0.50	<0.50	<1.0	<1.0	<0.50	<0.50	<0.10	<0.10	<u><0.10</u>	<0.10
01/29/98		30+000	<u><1.0</u>	<1.0	<0.50	<0.50	<0.50	<0.50	<1.0	<1.0	< 0.50	<0.50	<0.10	<0.10	<u><0.10</u>	<0.10
01/29/98		35+000	<1.0	<1.0	<0.50	<0.50	<0.50	<0.50	<1.0	<1.0	<0.50	<0.50	<0.10	<0.10	<0.10	<0.10
	Industrial Canal	50+00	<1.0	<1.0	<0.50	<0.50	<0.50	<0.50	<1.0	<1.0	<0.50	<0.50	<0.10	<0.10	<0.10	<0.10
01/29/98	Industrial Canal	85+00	<1.0	<1.0	<0.50	<0.50	<0.50	<0.50	<1.0	<1.0	<0.50	<0.50	<0.10	<0.10	<0.10	<0.10

 $\label{eq:Table D-1} \textbf{USACE Water and Elutriate Concentrations } (\mu g/L) \text{ at Texas City Stations}$

Date	Reach	Station	Benzo(ghi)	perylene	Dibenzo(ah)a	anthracene	Indeno(123	cd)pyrene	TotPes	sticides	Alc	lrin	Diel	drin	Endo:	sulfan
			Water	Elutriate	Water	Elutriate	Water	Elutriate	Water	Elutriate	Water	Elutriate	Water	Elutriate	Water	Elutriate
	Marine Acu	te Criteria									1.3		0.71		0.034	
11/17/86	Basin, Turning	0+000														
11/17/86	Channel	5+000														
11/17/86	Channel	10+000														
11/17/86	Channel	15+000														
11/17/86	Channel	20+000												***************************************	No. A. and and account of the second of the	
11/17/86	Channel	25+000														
11/17/86	Channel	30+000							,,,,,,,,,,,,,,		· · · · · · · · · · · · · · · · · · ·					
04/20/87	Industrial Canal	50+00											TRATE VINCOUNTY AND ADDRESS OF THE PARTY OF			
09/01/89	Channel	10+000	<0.1	<0.1	<0.5	<0.5	<0.5	<0.5			***************************************					
09/01/89		15+000	<0.1	<0.1	<0.5	<0.5	<0.5	<0.5								
09/01/89		20+000	<0.1	<0.1	<0.5	<0.5	<0.5	<0.5								
09/01/89		25+000	<0.1	<0.1	<0.5	<0.5	<0.5	<0.5	~~~~~							
09/01/89	Channel	30+000	<0.1	<0.1	<0.5	<0.5	<0.5	<0.5								
09/01/89	Channel	35+000	<0.1	0.7	<0.5	<0.5	<0.5	<0.5	***************************************							
07/07/92	Basin, Turning	1+000	<0.10	<0.10	<0.50	<0.50	<0.50	<0.50			***************************************					
07/07/92	Basin, Turning	3+000	<0.10	<0.10	<0.50	<0.50	<0.50	<0.50								
07/07/92	WT-MATERIAL PROPERTY.	5+000	<0.10	<0.10	<0.50	<0.50	<0.50	<0.50								
07/07/92		10+000	<0.10	<0.10	<0.50	<0.50	<0.50	<0.50								
07/07/92		15+000	<0.10	<0.10	<0.50	<0.50	<0.50	<0.50		The same of the sa						
	Ind. Canal & T.B.	18+00	<0.10	<0.10	<0.50	<0.50	<0.50	<0.50								
07/07/92	Channel	20+000	<0.10	<0.10	<0.50	<0.50	<0.50	<0.50								
07/07/92		25+000	<0.10	<0.10	<0.50	<0.50	<0.50	<0.50								
07/07/92	Channel	30+000	<0.10	<0.10	<0.50	<0.50	<0.50	<0.50								
07/07/92	Channel	35+000	<0.10	<0.10	<0.50	<0.50	<0.50	<0.50								
07/07/92	Industrial Canal	50+00	<0.10	<0.10	<0.50	<0.50	<0.50	<0.50				-				
07/07/92	Industrial Canal	85+00	<0.10	<0.10	<0.50	<0.50	<0.50	<0.50					W. M. C. C. C. C. C. C. C. C. C. C. C. C. C.			
08/31/95	Channel	1+000										-				
08/31/95	Channel	3+000											**************************************			
08/31/95	Channel	5+000														
08/31/95	Channel	10+000														
08/31/95	Channel	15+000														
08/31/95	Channel	20+000								***************************************						
08/31/95	Channel	25+000														
08/31/95	Channel	30+000									40000444					
01/29/98	Basin, Turning	1+000	<0.10	<0.10	<0.50	<0.50	<u><0.50</u>	<0.50	<2.00	<2.00	<0.04	<0.04	<0.02	<0.02	<0.10	<0.10
01/29/98	Basin, Turning	3+000	<0.10	<0.10	<0.50	<0.50	<0.50	<0.50	<2.00	<2.00	<0.04	<0.04	<0.02	<0.02	<0.10	<0.10
01/29/98	Channel	5+000	<0.10	<0.10	<0.50	<0.50	<0.50	<0.50	<2.00	<2.00	<0.04	<0.04	<0.02	<0.02	<0.10	
01/29/98		10+000	<0.10	<0.10	<0.50	<0.50	<0.50	<0.50	<2.00		<0.04		<0.02	<0.02	<0.10	<0.10
01/29/98		15+000	<0.10	<0.10	<0.50	<0.50	<0.50	<0.50	<2.00	<2.00	<0.04	<0.04	<0.02	<0.02	<0.10	<0.10
	Ind. Canal & T.B.		<0.10	<0.10	<0.50	<0.50	<0.50	<0.50	<2.00	<2.00	<0.04		<0.02	<0.02	<0.10	
01/29/98		20+000	<0.10	<0.10	<0.50	<0.50	<0.50	<0.50	<2.00	<2.00	<0.04	<0.04	<0.02	<0.02	<0.10	<0.10
01/29/98		25+000	<0.10	<0.10	<0.50	<0.50	<0.50	<0.50	<2.00	<2.00	<0.04	<0.04	<0.02	<0.02	<0.10	
01/29/98		30+000	<0.10	<0.10	<0.50	<0.50	<0.50	<0.50	<2.00	<2.00	<0.04	<0.04	<0.02	<0.02	<0.10	<0.10
01/29/98		35+000	<0.10	<0.10	<0.50	<0.50	<0.50	<0.50	<2.00	<2.00	<0.04	<0.04	<0.02	<0.02	<0.10	
	Industrial Canal	50+00	<0.10	<0.10	<0.50	<0.50	<0.50	<0.50	<2.00	<2.00	<0.04	<0.04	<0.02	<0.02	<0.10	
	Industrial Canal	85+00	<0.10	<0.10	<0.50	<0.50	<0.50	<0.50	<2.00	<2.00	<0.04	<0.04	<0.02	<0.02	<0.10	
0 1/20/00	maaatiai Oailai	00.00	-0.10	-0.10	٠٥.٥٥	٠٥.٥٥	~0.50	~0.50	~2.00	~2.00	~0.04		\0.02	<u>\0.02</u>	<u> </u>	~ 0.1

 $\label{eq:total constraints} Table \ D\text{-}1$ USACE Water and Elutriate Concentrations (µg/L) at Texas City Stations

Date	Reach	Station	End	rin	Hepta	chlor	Hexachloro	yclohexane	TotPe	trolHC	TotPh	enols	TotS	ulfides	Amn	nonia
			Water	Elutriate	Water	Elutriate	Water	Elutriate	Water	Elutriate	Water	Elutriate	Water	Elutriate	Water	Elutriate
	Marine Acı	ıte Criteria	0.037		0.053		0.16									
11/17/86	Basin, Turning	0+000														
11/17/86	Channel	5+000														
11/17/86	Channel	10+000														
1 <u>1/17/86</u>	Channel	15+000														
11/17/86	Channel	20+000														
11/17/86	Channel	25+000														
11/17/86	Channel	30+000							1				***************************************			
04/20/87	Industrial Canal	50+00						·	***************************************							
09/01/89	Channel	10+000						The second secon							W7.111.	***************************************
09/01/89	Channel	15+000			-				-							
09/01/89		20+000														
09/01/89	Channel	25+000			_							····				
09/01/89		30+000														
09/01/89		35+000								1						
	Basin, Turning	1+000			_		***************************************									
	Basin, Turning	3+000							1							
07/07/92		5+000							<u> </u>							
07/07/92	77774	10+000	-							T						
07/07/92		15+000														
	Ind. Canal & T.B.							777777777777777777777777777777777777777		1						
07/07/92		20+000			_											
07/07/92		25+000	-		_											
07/07/92		30+000			_											
07/07/92		35+000														
	Industrial Canal	50+00														***************************************
	Industrial Canal	85+00												·		
08/31/95		1+000														
08/31/95		3+000														
08/31/95		5+000			_											
08/31/95		10+000														
08/31/95		15+000							<u> </u>	ļ				-		
08/31/95		20+000								<u> </u>						
08/31/95		25+000														
08/31/95		30+000														
	Basin, Turning	1+000	<0.06	<0.06	<0.03	<0.03	<0.05	<0.05	<100	<100	~E0.0	-EO O	-0.40	-0.40		
	Basin, Turning	3+000	<0.06	<0.06	<0.03	<0.03	<0.05	<0.05	·		<50.0	<50.0	<0.10	<0.10	0.18	<0.03
01/29/98		5+000	<0.06	<0.06	<0.03	<0.03					<50.0	<50.0	<0.10	<0.10	0.17	<0.03
01/29/98		10+000	<0.06	<0.06	<0.03	<0.03	<0.05 <0.05	<0.05		<u> </u>	<50.0	<50.0	<0.10	<0.10	0.17	<0.03
01/29/98		15+000						<0.05	<u> </u>		<50.0	<50.0	<0.10	<0.10	0.18	<0.03
			<0.06 <0.06	<0.06	<0.03	<0.03	<0.05	<0.05	1		<50.0	<50.0	<0.10	<0.10	0.18	<0.03
01/29/98	Ind. Canal & T.B.	***************************************		<0.06	<0.03	<0.03	<0.05	< 0.05			<50.0	<50.0	<0.10	<0.10	0.16	<0.03
01/29/98		20+000	<0.06	<0.06	<0.03	<0.03	<0.05	<0.05			<50.0	<50.0	<0.10	<0.10	0.22	<0.03
		<u>25+000</u>	<0.06	<0.06	<0.03	<0.03	<0.05	<0.05			<50.0	<50.0	<0.10	<0.10	0.19	<0.03
01/29/98		30+000	<0.06	<0.06	<0.03	<0.03	<0.05	<0.05			<50.0	<50.0	<0.10	<0.10	0.2	<0.03
01/29/98		35+000	<0.06	<0.06	<0.03	<0.03	<0.05	<0.05			<50.0	<50.0	<0.10	<0.10	0.11	<0.03
	Industrial Canal	50+00	<0.06	<0.06	<0.03	<0.03	<0.05	<0.05			<50.0	<50.0	<0.10	<0.10	0.16	<0.03
01/29/98	Industrial Canal	85+00	<0.06	<0.06	<0.03	<0.03	<0.05	<0.05	<100	<100	<50.0	<50.0	<0.10	<0.10	0.19	<0.03

Table D-2
USACE Water and Elutriate Concentrations (µg/L) for Barbours Cut and Bayport Channels

Date	Reach	Station	Arse	enic	Bari	ium	Cadn	nium	Chro	mium	Cop	per	Le	ad	Mer	cury
			Water	Elutriate	Water	Elutriate	Water	Elutriate	Water	Elutriate	Water	Elutriate	Water	Elutriate	Water	Elutriate
ľ	Marine Ac	ute Criteria	149				45.4				13.5		133		2.1	
Barbours C	ut Channe	ei	}													
02/29/92	Channel	14+00	<2.0	<2.0			<2.0	<2.0	<10.0	<10.0	<1.0	<1.0	<5.0	<5.0	<0.2	<0.2
02/29/92	Channel	24+00	<2.0	<2.0			<2.0	<2.0	<10.0	<10.0	<1.0	8.1	<5.0	<5.0	<0.2	<0.2
02/29/92	Channel	34+00	<2.0	<2.0			<2.0	<2.0	<10.0	<10.0	<1.0	16.3	<5.0	<5.0	<0.2	<0.2
02/29/92	Channel	44+00	<2.0	<2.0			<2.0	<2.0	<10.0	<10.0	<1.0	6.7	<5.0	<5.0	<0.2	<0.2
02/29/92	Channel	54+00	<2.0	<2.0			<2.0	<2.0	<10.0	<10.0	<1.0	<1.0	<5.0	<5.0	<0.2	<0.2
02/29/92	Channel	64+00	<2.0	<2.0			<2.0	<2.0	<10.0	<10.0	<1.0	<1.0	<u><5.0</u>	<5.0	<0.2	<0.2
02/29/92	Channel	74+00	<2.0	<2.0			<2.0	<2.0	<10.0	<10.0	<1.0	<1.0	<5.0	<5.0	<0.2	<0.2
02/29/92	Channel	84+00	<2.0	<2.0			<2.0	<u><2.0</u>	<10.0	<10.0	<1.0	<1.0	<5.0	<5.0	<0.2	<0.2
02/29/92	Channel	84+00	<2.0	<2.0			<2.0	<2.0	<10.0	<10.0	<1.0	<1.0	<5.0	<5.0	<0.2	<0.2
09/22/94	Channel	14+00	BDL	BDL	79.0	283.0	BDL	BDL	BDL	6.2	BDL	2.8	BDL	8.5	BDL	BDL
09/22/94	Channel	24+00	BDL	BDL	76.3	137.0	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	0.72
09/22/94	Channel	34+00	BDL	BDL	75.6	121.0	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
09/22/94	Channel	44+00	BDL	BDL	74.7	143.0	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
09/22/94	Channel	54+00	BDL	BDL	75.0	83.7	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
09/22/94	<u>Channel</u>	64+00	BDL	BDL	74.6	102.0	BDL	BDL	BDL	BDL	BDL	BDL	BDL	4.25	BDL	BDL
09/22/94	Channel	74+00	BDL	BDL	73.8	111.0	BDL	BDL	BDL	3.0	BDL	3.1	BDL	BDL	BDL	BDL
09/22/94	Channel	84+00	BDL	BDL	74.4	114.0	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	0.5
09/22/94	Channel	84+00	BDL	BDL	72.7	99.2	BDL	BDL	BDL	BDL	<u>BDL</u>	BDL	BDL	BDL	BDL	BDL
05/29/97	Channel	14+00	<1.0	<1.0	62.9	41.9	<0.10	<0.10	2.35	<1.0	<1.0	<1.0	<1.0	<1.0	<0.2	<0.2
05/29/97	Channel Channel	34+00	<u><1.0</u>	<1.0	62.3	48.0	<u><0.10</u>	<0.10	1.44	<1.0	4.47	<u><1.0</u>	<1.0	<1.0	<0.2	<0.2
05/29/97	Channel	54+00	<1.0	<1.0	65.1	37.2	0.44	0.17	2.35	<1.0	<u>5.56</u>	<1.0	<1.0	<1.0	<0.2	<0.2
05/29/97		74+00	<1.0	<1.0	61.7	23.1	<0.10	<0.10	1.44	<1.0	3.8	<1.0	<1.0	<1.0	<0.2	<0.2
05/29/97		84+00	<1.0	<1.0	60.2	61.2	<0.10	<0.10	1.44	4.88	3.66	<1.0	<1.0	<1.0	<0.2	<0.2
09/24/98		14+00	<1.00	<1.00	101.0	117.0	<0.10	<0.10	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<0.20	<0.20
09/24/98		34+00	<1.00	<1.00	99.3	116.0	<0.10	<0.10	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<0.20	<0.20
09/24/98		54+00	<1.00	<1.00	101.0	66.2	<0.10	<0.10	<1.00	<u><1.00</u>	2.04	<1.00	<1.00	<1.00	<0.20	<0.20
09/24/98		74+00	<1.00	<1.00	99.1	99.9	<0.10	<0.10	<1.00	<1.00	2.59	<1.00	<1.00	<1.00	<0.20	<0.20
09/24/98		84+00	<1.00	<1.00	<u>101.5</u>	122.0	<0.10	<0.10	<1.00	<1.00	1.23	<1.00	<1.00	<1.00	<0.20	<0.20
Bayport C																
09/22/94		38+00	<1.0	<1.0	82.0	60.6	<0.10	<0.10	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.2	
09/22/94		50+00	<1.0	<1.0	83.0	84.6	<0.10	<0.10	4.3	2.3	<1.0	<1.0	<1.0	<1.0	<0.2	
09/22/94		100+00	<1.0	<1.0	80.6	103.8	<0.10	≤0.10	1.6	<1.0	<u><1.0</u>	<1.0	<1.0	<1.0	<0.2	
09/22/94		150+00	<1.0	<1.0	79.2	157.0	<0.10	<0.10	3.9	1.7	<1.0	<1.0	<1.0	<1.0	<0.2	
09/22/94		200+00	<1.0	<1.0	77.3	84.6	<0.10	<0.10	<1.0	2.3	<1.0	<1.0	<1.0	<1.0	<0.2	
03/06/97		150+00	<1.0	<1.0	57.1	32.7	0.75	1.02	<1.0	<1.0	3.02	1.79	<1.0	<1.0	<0.20	
03/06/97		200+00	<1.0	<1.0	<u>56.7</u>	58.6	<0.10	<1.0	<1.0	<u><1.0</u>	2.64	5.11	<1.0	<1.0	<0.20	
03/03/98		38+00	<1.0	13.0	59.0	33.0	<0.1	1.0	<u><1.0</u>	<1.0	3.0	<1.0	<1.0	<1.0	<0.20	
03/03/98		58+00	<1.0	7.0	<u>59.0</u>	36.0	<0.1	<0.1	<1.0	<1.0	4.0	<1.0	<1.0	<1.0	<0.20	
03/03/98		100+00	<1.0	<1.0	<u>58.0</u>	68.0	<0.1	<0.1	<1.0	<1.0	5.0	1.0	<1.0	<1.0	<0.20	
03/03/98		150+00	<1.0	12.0	58.0	64.0	<0.1	<u><0.1</u>	<1.0	<1.0	4.0	1.0	<1.0	11.0	<0.20	
03/03/98		200+00	<1.0	<1.0	56.0	72.0	<0.1	<0.1	<1.0	<1.0	3.0	<1.0	<1.0	8.0	<0.20	+
08/31/99		100+00	<1.00	<1.00	57.6	95.1	0.20	0.10	2.85	1.10	<1.00	1.42	<1.00	<1.00	<0.20	
08/31/99		150+00	<1.00	<1.00	76.0	110.0	0.20	<u><0.10</u>	1.97	<1.00	<u><1.00</u>	<1.00	<1.00	<1.00	<0.20	<0.20
08/31/99	Channel	200+00	<1.00	<1.00	74.8	95.9	0.10	<0.10	1.72	<1.00	<1.00	<1.00	<1.00	<1.00	<0.20	<0.20

 $\label{eq:table D-2 (Continued)} Table \ D-2 \ (Continued) \\ USACE \ Water \ and \ Elutriate \ Concentrations \ (\mu g/L) \ for \ Barbours \ Cut \ and \ Bayport \ Channels$

Date	Reach	Station	Nic	lial	Silv	ion I	Seler	inm	Zi	ne	T	OC	Total	РСВ	4.4	DDT
Date	Reacii	Station	Water	Elutriate	Water	Elutriate	Water	Elutriate	Water	Elutriate	Water	Elutriate	Water	Elutriate	Water	Elutriate
	 Marine Acı	ite Criteria	118	Eigiliaic	2	Eigiliate	564	Eluttiate	92.7	Liutilate	W ALEI	Liuttiate	10	Liutifate	0.13	Liutiate
	Cut Channe															
		14+00	<5.0	<5.0			<2.0	<2.0	13.0	5.0	5.90	5.50	<0.5	<0.5	<0.02	<0.02
02/29/92		24+00	<5.0	<5.0			<2.0	<2.0	10.0	8.0	2.70	3.80	<0.5	<0.5	<0.02	<0.02
02/29/92		34+00	<5.0	<5.0			<2.0	<2.0	<5.0	8.0	4.70	11.30	<0.5		<0.02	
02/29/92		44+00	<5.0	<5.0		**************************************	<2.0	<2.0	<5.0	11.0	4.60	12.80	<0.5	<0.5	<0.02	<0.02
02/29/92		54+00	<5.0	<5.0			<2.0	<2.0	9.0	43.0	2.20	12.20	<0.5		<0.02	<0.02
02/29/92		64+00	<5.0	<5.0			<2.0	<2.0	<5.0	8.0	3.40	5.60	<0.5	<0.5	<0.02	<0.02
02/29/92		74+00	<5.0	<5.0		***************************************	<2.0	<2.0	<5.0	10.0	2.40	4.00	<0.5	<0.5	<0.02	<0.02
02/29/92		84+00	<5.0	<5.0			<2.0	<2.0	10.0	<5.0	3.80	7.20	<0.5	<0.5	<0.02	<0.02
02/29/92	Channel	84+00	<5.0	<5.0		***************************************	<2.0	<2.0	10.0	<5.0	9.00	7.20	<0.5	<0.5	<0.02	<0.02
09/22/94	Channel	14+00	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	34.90	78.00	BDL	BDL	BDL	BDL
09/22/94	Channel	24+00	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	8.20	18.90	BDL	BDL	BDL	BDL
09/22/94	Channel	34+00	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	10.30	14.50	BDL	BDL	BDL	BDL
09/22/94	Channel	44+00	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	18.30	19.00	BDL	BDL	BDL	BDL
09/22/94	Channel	54+00	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	12.00	16.40	BDL	BDL	BDL	BDL
09/22/94	Channel	64+00	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	11.40	15.10	BDL	BDL	BDL	BDL
09/22/94	Channel	74+00	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	16.20	BDL	BDL	BDL	BDL
09/22/94		84+00	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	15.60	30.50	BDL	BDL	BDL	BDL
09/22/94		84+00	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	<u>14.20</u>	4.90	BDL	BDL	BDL	BDL
05/29/97		14+00	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	12.7	<1.0	1.00	<1.00	<0.01	<0.01	<0.10	<0.10
05/29/97		34+00	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	7.6	1.4	1.00	<1.00	<0.01	<0.01	<0.10	
05/29/97		54+00	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	10.7	2.0	1.00	<1.00	<0.01	<0.01	<u><0.10</u>	
05/29/97		74+00	<1.0	<1.0	<u><1.0</u>	<1.0	<u><1.0</u>	<1.0	7.6	3.2	1.00	<1.00	<0.01	<0.01	<0.10	<0.10
05/29/97		84+00	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	6.3	8.2	1.00	<1.00	<0.01	<0.01	<u><0.10</u>	<0.10
09/24/98		14+00	<1.00	<1.00	<1.00	<1.00	<5.00	<5.00	18.3	5.6	<1.00	1.87	<0.01	<0.01	<0.10	<0.10
09/24/98		34+00	<1.00	<1.00	<1.00	<1.00	<5.00	<5.00	16.4	4.8	<1.00	2.34	<0.01	<0.01	<u><0.10</u>	
09/24/98		54+00	<1.00	<1.00	<1.00	<1.00	<5.00	<5.00	19.4	2.7	<1.00	1.70	<0.01	<0.01	<0.10	<0.10
09/24/98		74+00	<1.00	<1.00	<1.00 <1.00	<1.00 <1.00	<5.00	<5.00	17.8	3.7	<1.00	1.78	< 0.01	<0.01	<0.10	
09/24/98		84+00	<1.00	<1.00	<1.00	<1.00	<5.00	<5.00	18.0	4.4	<1.00	<1.00	<0.01	<0.01	<0.10	<0.10
Bayport C 09/22/94		38+00	<1.0	<1.0	<1.0	<1.0	<2.0	<2.0	11.2	<1.0	1.70	1.50	<0.50	<0.50	<0.12	-0 15
09/22/94		50+00	<1.0	<1.0	<1.0	<1.0	<2.0	<2.0 <2.0	16.3	4.6	1.70	2.80	<0.50	<0.50	<0.12	<0.12
09/22/94		100+00	<1.0	<1.0	<1.0	<1.0	<2.0	<2.0	19.1	<1.0	4.50	4.70	<0.50		<0.12	·
09/22/94		150+00	<1.0	<1.0	<1.0	<1.0	<2.0	<2.0	11.2	<1.0	7.00	2.60	<0.50		<0.12	<u> </u>
09/22/94		200+00	<1.0	<1.0	<1.0	<1.0	<2.0	<2.0	10.3	<1.0	3.10	2.80	<0.50	<0.50	<0.12	<0.12
03/06/97		150+00	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	8.3	17.4	7.20	<1.00	<0.01	<0.01	<0.12	<0.12
03/06/97		200+00	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	9.3	29.5	<1.00	<1.00	<0.01	<0.01	<0.10	*****
03/03/98		38+00	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.00	<1.00	<0.01	<0.01	<0.10	
03/03/98		58+00	10.0	<1.0	<1.0	<1.0	<1.0	<1.0	11.0	<1.0	<1.00	<1.00	<0.01	<0.01	<0.10	+
03/03/98		100+00	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	12.0	<1.0	<1.00	<1.00	<0.01	<0.01	<0.10	
03/03/98		150+00	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	12.0	<1.0	<1.00	<1.00	<0.01	<0.01	<0.10	<0.10
03/03/98		200+00	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	10.0	₹1.0	<1.00	<1.00	<0.01	<0.01	<0.10	
08/31/99		100+00	<1.00	<1.00	<1.00	<1.00	4.1	7.9	2.4	3.2			<0.01	<0.01	<0.10	
08/31/99		150+00	<1.00	<1.00	<1.00	<1.00	4.3	5.8	3.3	2.6			< 0.01	<0.01	<0.10	
	Channel	200+00	<1.00	<1.00	<1.00	<1.00	1.8	6.0	2.7	2.7			<0.01	<0.01	<0.10	

 $\label{eq:table D-2 (Continued)} \textbf{USACE Water and Elutriate Concentrations } (\mu g/L) \ \text{for Barbours Cut and Bayport Channels}$

Date	Reach	Station	Chlor	dane	Toxar	ohene	Total	PAH	Naphti	halene	Acenap	hthene	Fluora	nthene	Benzo(a)pyrene
Dute	110.00.0	J	Water	Elutriate	Water	Elutriate	Water	Elutriate	Water	Elutriate	Water	Elutriate	Water	Elutriate	Water	Elutriate
N	Marine Acı	ute Criteria	0.09		0.21											
Barbours (Cut Channe	l														
02/29/92	Channel	14+00	<0.02	<0.02	<0.5	<0.5	<5.0	<5.0	<2.0	<2.0	<u><2.0</u>	<2.0	<0.5	<0.5	<0.5	<0.5
02/29/92	Channel	24+00	<0.02	<0.02	<0.5	<0.5	<u><5.0</u>	<5.0	<2.0	<2.0	<2.0	<2.0	<0.5	<0.5	<0.5	<0.5
02/29/92	Channel	34+00	<0.02	<0.02	<0.5	<0.5	<5.0	<5.0	<2.0	<2.0	<2.0	<2.0	<u><0.5</u>	<0.5	<0.5	<0.5
02/29/92	Channel	44+00	<0.02	<0.02	<0.5	<0.5	<5.0	<5.0	<2.0	<2.0	<2.0	<2.0	<0.5	<0.5	<0.5	<0.5
02/29/92	Channel	54+00	<0.02	<0.02	<0.5	<0.5	<u><5.0</u>	<5.0	<2.0	<2.0	<2.0	<2.0	<u><0.5</u>	<0.5	<0.5	<0.5
02/29/92	Channel	64+00	<0.02	<0.02	<0.5	<0.5	<u><5.0</u>	<5.0	<u><2.0</u>	<2.0	<2.0	<2.0	<0.5	<0.5	<0.5	<0.5
02/29/92		74+00	<0.02	<0.02	<u><0.5</u>	<0.5	<5.0	<5.0	<2.0	<2.0	<u><2.0</u>	<2.0	<0.5	<0.5	<0.5	<0.5
02/29/92	<u> </u>	84+00	<0.02	<0.02	<u><0.5</u>	<0.5	<5.0	<5.0	<2.0	<2.0	<2.0	<2.0	<0.5	<0.5	<0.5	
02/29/92		84+00	<0.02	<0.02	<0.5	<0.5	<u><5.0</u>	<5.0	<2.0	<2.0	<2.0	<2.0	<0.5	<0.5	<0.5	<0.5
09/22/94		14+00	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
09/22/94		24+00	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
09/22/94		34+00	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
09/22/94		44+00	BDL	BDL	BDL	BDL	BDL	BDL	BDL BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
09/22/94		54+00	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
09/22/94	4	64+00	BDL	BDL	BDL	BDL	BDL	BDL	BDL BDL	BDL BDL	BDL BDL	BDL BDL	BDL BDL	BDL	BDL BDL	BDL
09/22/94		74+00	BDL	BDL	BDL BDL	BDL BDL	BDL BDL	BDL BDL	BDL	BDL	BDL	BDL	BDL	BDL BDL	BDL	BDL BDL
09/22/94 09/22/94		84+00 84+00	BDL BDL	BDL BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
05/29/97		14+00	<0.14	<0.14	<0.50	<0.50	<5.00	<5.00	<2.00	<2.00	<2.00	<2.00	<0.50	<0.50	<0.50	·
05/29/97		34+00	<0.14	<0.14	<0.50	<0.50	<5.00	<5.00	<2.00	<2.00	<2.00	<2.00	<0.50	<0.50	<0.50	-
05/29/97	·	54+00	<0.14	<0.14	<0.50	<0.50	<5.00	<5.00	<2.00	<2.00	<2.00	<2.00	<0.50	<0.50	<0.50	
05/29/97		74+00	<0.14	<0.14	<0.50	<0.50	<5.00	<5.00	<2.00	<2.00	<2.00	<2.00	<0.50		<0.50	
05/29/97		84+00	<0.14	<0.14	<0.50	<0.50	<5.00	<5.00	<2.00	<2.00	<2.00	<2.00	<0.50	<0.50	<0.50	<0.50
09/24/98		14+00	<0.14	<0.14	<0.50	<0.50	<5.00	<5.00	<2.00	<2.00	<2.00	<2.00	<0.50	<0.50	<0.50	<0.50
09/24/98		34+00	<0.14	<0.14	<0.50	<0.50	<5.00	<5.00	<2.00	<2.00	<2.00	<2.00	<0.50	<0.50	<0.50	
09/24/98	1	54+00	<0.14	<0.14	<0.50	<0.50	<5.00	<5.00	<2.00	<2.00	<2.00	<2.00	<0.50	<0.50	<0.50	
09/24/98	Channel	74+00	<0.14	<0.14	<0.50	<0.50	<5.00	<5.00	<2.00	<2.00	<2.00	<2.00	< 0.50	<0.50	<0.50	
09/24/98	Channel	84 700	<0.14	<0.14	<0.50	<0.50	<5.00	<5.00	<2.00	<2.00	<2.00	<2.00	<0.50	<0.50	<0.50	<0.50
Bayport (Channel								-							
09/22/94	Channel	38+00	<0.14	<0.14	<u><0.50</u>	<0.50	<u><5.00</u>	<u><5.00</u>	<u><2.0</u>	<2.0	<2.0	<2.0	<0.50	<0.50	<0.50	<0.50
09/22/94	Channel	50+00	<0.14	<0.14	<0.50	<0.50	<5.00	<5.00	<2.0	<2.0	<2.0	<2.0	<0.50		<0.50	<0.50
09/22/94	Channel	100+00	<0.14	<0.14	<u><0.50</u>	<0.50	<5.00	<5.00	<2.0	<2.0	<2.0	<2.0	<0.50		<0.50	
09/22/94	Channel	150+00	<0.14	<0.14	<0.50	<0.50	<5.00	<5.00	<2.0	<2.0	<2.0	<2.0	<0.50		<0.50	<0.50
09/22/94	to the same	200+00	<0.14	<0.14	<0.50	<0.50	<5.00	<5.00	<2.0	<2.0	<2.0	<2.0	<u><0.50</u>		<0.50	
03/06/97		150+00	<u><0.14</u>	<0.14	<0.50	<0.50	<5.00	<5.00	<2.0	<2.0	<2.0	<2.0	<0.50		<0.50	<0.50
03/06/97		200+00	<0.14	<0.14	<u><0.50</u>	<0.50	<5.00	<5.00	<2.0	<2.0	<2.0	<2.0	<0.50		<0.50	<0.50
03/03/98		38+00	<0.14	<0.14	<0.50	<0.50	<5.00	<5.00	<2.00	<2.00	<2.00	<2.00	<0.50	4	<0.50	·
	Channel	58+00	<0.14	<0.14	<0.50	<0.50	<5.00	<5.00	<2.00	<2.00	<2.00	<2.00	<0.50		<0.50	,
<u> -03/03/98</u>		100+00	<0.14	<0.14	<u><0.50</u>	<0.50	<u><5.00</u>	<u><5.00</u>	<2.00	<2.00	<2.00	<2.00	<0.50		<0.50	
	Channel	150+00	<0.14	<0.14	<0.50	<0.50	<5.00	<5.00	<2.00	<2.00	<2.00	<2.00	<0.50	}	<0.50	
03/03/98		200+00	<0.14	<0.14	<0.50	<0.50	<5.00	<5.00	<2.00	<2.00	<2.00	<2.00	<0.50		<0.50	
08/31/99		100+00	<0.14	<0.14	<0.50	<0.50	< 5.00	<5.00	<2.00	<2.00	<2.00	<2.00	<0.50	·	<0.50	
	Channel	150+00	<0.14	<0.14	<0.50	<0.50	<5.00	<5.00	<2.00	<2.00	<2.00	<2.00	<0.50		<0.50	
08/31/99	Channel	200+00	<0.14	<0.14	<0.50	<0.50	<5.00	<5.00	<2.00	<2.00	<2.00	<2.00	<0.50	<0.50	<0.50	<0.50

 $\label{eq:table D-2 (Continued)} Table D-2 (Continued) \\ USACE Water and Elutriate Concentrations (µg/L) for Barbours Cut and Bayport Channels$

Date	Reach	Station	Benzo(e)pyrene	Acenaph	thylene	Fluo	rene	Phenar	ithrene	Anthr	acene	Pyr	ene	Benzo(a)ar	ithracene
			Water	Elutriate	Water	Elutriate	Water	Elutriate	Water	Elutriate	Water	Elutriate	Water	Elutriate	Water	Elutriate
		te Criteria							7.7							
Barbours C		!			Ì											
02/29/92		14+00			<2.5	<2.5	<0.50	<0.50	<1.0	<1.0	<1.0	<1.0	<0.50	<0.50	<1.0	<1.0
02/29/92		24+00			<2.5	<2.5	<0.50	<0.50	<u><1.0</u>	<1.0	<1.0	<1.0	<0.50	<0.50	<1.0	<1.0
02/29/92		34+00			<2.5	<2.5	<u><0.50</u>	<0.50	<1.0	<1.0	<1.0	<1.0	<0.50	<0.50	<1.0	<1.0
02/29/92		44+00			<2.5	<2.5	<0.50	<0.50	<1.0	<1.0	<1.0	<1.0	<0.50	<0.50	<1.0	<1.0
02/29/92		54+00			<2.5	<2.5	<0.50	<0.50	<1.0	<1.0	<1.0	<1.0	<0.50	<0.50	<1.0	<1.0
02/29/92		64+00			<u><2.5</u>	<2.5	<0.50	<0.50	<1.0	<1.0	<1.0	<1.0	<u><0.50</u>	<0.50	<1.0	<1.0
02/29/92		74+00			<2.5	<2.5	<0.50	<0.50	<1.0	<1.0	<1.0	<1.0	<0.50	< 0.50	<1.0	<1.0
02/29/92		84+00			<2.5	<2.5	< 0.50	<0.50	<1.0	<1.0	<1.0	<1.0	<0.50	<0.50	<1.0	<1.0
02/29/92		84+00			<2.5	<2.5	<0.50	<0.50	<1.0	<1.0	<1.0	<1.0	<0.50	<0.50	<1.0	<1.(
09/22/94		14+00														
09/22/94		24+00														
09/22/94		34+00														
09/22/94		44+00														
09/22/94 09/22/94		54+00 64+00							and to have more a constant of the constant of							
09/22/94		74+00														
09/22/94		84+00														
09/22/94		84+00														
05/29/97		14+00	<0.50	<0.50	<2.00	<2.00	<0.50	<0.50	<1.00	<1.00	<0.50	<0.50	<0.50	<0.50	<1.00	<1.00
05/29/97		34+00	<0.50	<0.50	<2.00	<2.00	<0.50	<0.50	<1.00	<1.00	<0.50	<0.50	<0.50	<0.50	<1.00	<1.00
05/29/97		54+00	<0.50	<0.50	<2.00	<2.00	<0.50	<0.50	<1.00	<1.00	<0.50	<0.50	<0.50	<0.50	<1.00	<1.00
05/29/97		74+00	<0.50	<0.50	<2.00	<2.00	< 0.50	<0.50	<1.00	<1.00	<0.50	<0.50	<0.50	<0.50	<1.00	<1.00
05/29/97		84+00	<0.50	<0.50	<2.00	<2.00	< 0.50	<0.50	<1.00	<1.00	<0.50	<0.50	<0.50	<0.50	<1.00	<1.00
09/24/98		14+00	<0.50	<0.50	<2.50	<2.50	<0.50	<0.50	<1.00	<1.00	<2.00	<2.00	<0.50	<0.50	<1.00	<1.00
09/24/98		34+00	<0.50	<0.50	<2.50	<2.50	<0.50	<0.50	<1.00	<1.00	<2.00	<2.00	<0.50	<0.50	<1.00	<1.00
09/24/98	Channel	54+00	<0.50	<0.50	<2.50	<2.50	<0.50	<0.50	<1.00	<1.00	<2.00	<2.00	<0.50	<0.50	<1.00	<1.00
09/24/98	Channel	74+00	<0.50	<0.50	<2.50	<2.50	<0.50	<0.50	<1.00	<1.00	<2.00	<2.00	<0.50	<0.50	<1.00	<1.00
09/24/98	Channel	84+00	<0.50	<0.50	<2.50	<2.50	<0.50	<0.50	<1.00	<1.00	<2.00	<2.00	<0.50	<0.50	<1.00	<1.00
Bayport C	hannel															
09/22/94	Channel	38+00	<0.50	<0.50	<2.5	<2.5	<0.50	<0.50	<1.0	<1.0	<0.50	<0.50	<0.50	<0.50	<1.0	<1.0
09/22/94	Channel	50+00	<0.50	<0.50	<2.5	<2.5	<0.50	<0.50	<1.0	<1.0	<0.50	<0.50	<0.50	<0.50	<1.0	<1.0
09/22/94	Channel	100+00	<0.50	<0.50	<2.5	<2.5	<0.50	<0.50	<1.0	<1.0	<0.50	<0.50	<0.50	<0.50	<1.0	<1.0
09/22/94	Channel	150+00	<0.50	<0.50	<2.5	<2.5	<0.50	<0.50	<1.0	<1.0	<0.50	<0.50	<0.50	<0.50	<1.0	<1.0
09/22/94	Channel	200+00	<0.50	<0.50	<u><2.5</u>	<2.5	<0.50	<0.50	<1.0	<1.0	<0.50	<0.50	<0.50	<0.50	<1.0	<1.0
03/06/97	Channel	150+00	<0.50	<0.50	<2.50	<2.50	<0.50	<0.50	<1.00	<1.00	<0.50	<0.50	<0.50	<0.50	<1.00	<1.00
03/06/97		200+00	<0.50	<0.50	<2.50	<2.50	<0.50	<u><0.50</u>	<1.00	<1.00	<0.50	<0.50	<0.50	<0.50	<u><1.00</u>	<1.00
03/03/98		38+00	<0.50	<0.50	<2.5	<2.5	<0.5	<0.5	<1.0	<1.0	<0.5	<0.5	<0.5	<0.5	<1.5	<1.5
03/03/98	All residents	58+00	<0.50	<0.50	<2.5	<2.5	<0.5		<1.0		<0.5	<0.5	<0.5	<0.5	<1.5	<1.5
03/03/98		100+00	<0.50	<0.50	<2.5	<2.5	<0.5	<0.5	<1.0	<1.0	<0.5	<0.5	<0.5	<0.5	<1.5	<1.5
03/03/98		150+00	<0.50	<0.50	<2.5	<2.5	<0.5	<0.5	<u><1.0</u>	<1.0	<0.5	<0.5	<0.5	<0.5	<1.5	<1.5
03/03/98		200+00	<0.50	<0.50	<2.5	<2.5	<0.5	<0.5	<1.0	<1.0	<0.5	<0.5	<u><0.5</u>	<0.5	<1.5	<1.5
08/31/99		100+00	<0.50	<0.50	<u><2.50</u>	<2.50	<0.50	<0.50	<1.00		<0.50	<0.50	<0.50	<0.50	<1.50	<1.50
08/31/99	*****	150+00	<0.50	<0.50	<2.50	<2.50	<0.50	<0.50	<1.00		<0.50	<0.50	<0.50	<0.50	<1.50	<1.50
08/31/99	Channel	200+00	<0.50	<0.50	<2.50	<2.50	<0.50	<0.50	<1.00	<1.00	<0.50	<0.50	<0.50	<0.50	<1.50	<1.50

 $\label{eq:Table D-2 (Continued)} \begin{tabular}{ll} Table D-2 (Continued) \\ USACE Water and Elutriate Concentrations ($\mu g/L$) for Barbours Cut and Bayport Channels \\ \end{tabular}$

Date	Reach	Station	Chry	sene	Benzo(b)flu	oranthene	Benzo(k)flu	oranthene	Benzo(ghi)perylene	Dibenzo(ah)a	nthracene	Indeno(123c	ed)pyrene
			Water	Elutriate	Water	Elutriate	Water	Elutriate	Water	Elutriate	Water	Elutriate	Water	Elutriate
	Marin	e Acute Criteria												
Barbours Cut														
02/29/92	Channel	14+00	<0.50	<0.50	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.50	<0.50	<u><0.50</u>	<0.50
	Channel Channel	24+00	<0.50	<0.50	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.50	<0.50	<0.50	<0.50
02/29/92	Channel	34+00	<0.50	<0.50	<u><0.10</u>	<0.10	<0.10	<0.10	<0.10	<0.10	<0.50	<0.50	<0.50	<0.50
02/29/92	Channel	44+00	<0.50	<0.50	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.50	<0.50	<0.50	<0.50
02/29/92	Channel	54+00	<0.50	<0.50	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.50	<0.50	<0.50	<0.50
02/29/92	Channel	64+00	<u><0.50</u>	<0.50	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.50	<0.50	<0.50	<0.50
	Channel	74+00	<0.50	<0.50	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.50	<0.50	<0.50	<0.50
	Channel	84+00	<0.50	<0.50	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.50	<0.50	<0.50	<0.50
02/29/92	Channel	84+00	<0.50	<0.50	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.50	<u><0.50</u>	<0.50	<0.50
09/22/94	Channel	14+00												
	Channel	24+00												
	Channel	34+00												
09/22/94	Channel	44+00												
	Channel	54+00					Wanner was 100 mm							
	Channel	64+00												
	Channel	74+00												
	Channel	84+00												
	Channel	84+00				400/44 A A A A A A A A A A A A A A A A A A								
	Channel	14+00	<1.00	<1.00	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.50	<0.50	<0.50	<0.50
	Channel	34+00	<1.00	<1.00	<0.10	<u><0.10</u>	<u><0.10</u>	<0.10	<0.10	<0.10	<0.50	<0.50	<0.50	<0.50
	Channel	54+00	<1.00	<1.00	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.50	<0.50	<0.50	<0.50
	Channel	74+00	<1.00	<1.00	<0.10	<u><0.10</u>	<0.10	<0.10	<0.10	<0.10	<0.50	<0.50	<0.50	<0.50
	Channel	84+00	<1.00	<1.00	<0.10	<u><0.10</u>	<0.10	<0.10	<0.10	<0.10	<0.50	<0.50	<0.50	<u><0.50</u>
	Channel	14+00	<0.50	<0.50	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.50	<0.50	<0.50	<0.50
	Channel	34+00	<0.50	<0.50	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.50	<0.50	<0.50	<0.50
	Channel	54+00	<0.50	<0.50	<0.10	<u><0.10</u>	<0.10	<0.10	<0.10	<0.10	<0.50	<0.50	<0.50	<0.50
	Channel	74+00	<0.50	<0.50	<0.10	<u><0.10</u>	<0.10	<0.10	<0.10	<0.10	<0.50	<0.50	<0.50	<u><0.50</u>
	Channel	84+00	<0.50	<0.50	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.50	<0.50	<0.50	<0.50
Bayport Cha														
	Channel	38+00	<0.50	<0.50	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.50	<0.50	<0.50	<0.50
	Channel	50+00	<0.50	<0.50	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<u><0.50</u>	<0.50	<0.50	<0.50
	Channel	100+00	<u><0.50</u>	<0.50	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<u><0.50</u>	<0.50	<0.50	<0.50
	Channel	150+00	<0.50	<0.50	<0.10	<u><0.10</u>	<0.10	<0.10	<0.10	<0.10	<0.50	<0.50	<0.50	<0.50
	Channel	200+00	<u><0.50</u>	<0.50	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.50	<0.50	<0.50	<0.50
	Channel	<u>150+00</u>	<0.50	<0.50	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.50	<0.50	<0.50	<0.50
	Channel	200+00	<u><0.50</u>	<0.50	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<u><0.50</u>	<0.50	<0.50	<0.50
	Channel	38+00	<0.5	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.5	< <u>0.5</u>
	Channel	58+00	<0.5	<0.5	<u><0.1</u>	<0.1	<u><0.1</u>	<0.1	<0.1	<0.1	<0.5	<0.5	<0.5	<0.5
	Channel	100+00	<0.5	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<u><0.5</u>	<0.5
	Channel	<u>150+00</u>	<0.5	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.5	<0.5
	Channel	200+00	<0.5	<0.5	<0.1	<u><0.1</u>	<u><0.1</u>	<0.1	<0.1	<0.1	<0.5	<0.5	<u><0.5</u>	<0.5
	Channel	100+00	<0.50	<0.50	<0.10	<u><0.10</u>	<0.10	<0.10	<0.10	<0.10	<0.50	<0.50	<0.50	<0.50
	Channel	<u>150+00</u>	<0.50	<0.50	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.50	<0.50	<0.50	<u><0.50</u>
08/31/99	Channel	200+00	<0.50	<0.50	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.50	<0.50	< 0.50	<0.50

 $\label{eq:continued} \textbf{Table D-2 (Continued)} \\ \textbf{USACE Water and Elutriate Concentrations } (\mu g/L) \ \text{for Barbours Cut and Bayport Channels} \\$

Date	Reach	Station	TotPes	ticides	Ald	rin	Diel	drin	Endos	ulfan	Enc	rin	Hept	achlor	Hexachloroc	vclohexane
	A POLICE AND A POL		Water	Elutriate	Water	Elutriate	Water	Elutriate	Water	Elutriate	Water	Elutriate	Water	Elutriate	Water	Elutriate
	Marine	e Acute Criteria			1.3		0.71		0.034		0.037		0.053		0.16	
Barbours Cut	Channel															<u></u>
1	Channel	14+00														
	Channel	24+00														
02/29/92	Channel	34+00								***************************************						
	Channel	44+00														P
	Channel	54+00										······				
	Channel	64+00								20017-2						
-	Channel	74+00														***************************************
02/29/92	Channel	84+00	1													Y
	Channel	84+00														
	Channel	14+00														40000
09/22/94	Channel	24+00			<u> </u>							***************************************	·			~
	Channel	34+00														
	Channel	44+00														
	Channel	54+00														
	Channel	64+00					***************************************									
	Channel	74+00										***************************************				
	Channel	84+00														
09/22/94	Channel	84+00														
	Channel	14+00	<1.00	<1.00	<0.02	<0.02	<0.02	<0.02	<0.10	<0.10	<0.06	<0.06	<0.03	<0.03	<0.02	<0.02
05/29/97	Channel	34+00	<1.00	<1.00	<0.02	<0.02	<0.02	<0.02	<0.10	<0.10	<0.06	<0.06	<0.03	<0.03	<0.02	<0.02
05/29/97	Channel	54+00	<1.00	<1.00	<0.02	<0.02	<0.02	<0.02	<0.10	<0.10	<0.06	<0.06	<0.03	<0.03	<0.02	<0.02
05/29/97	Channel	74+00	<1.00	<1.00	<0.02	<0.02	<0.02	<0.02	<0.10	<0.10	<0.06	<0.06	<0.03	<0.03	<0.02	<0.02
	Channel	84+00	<1.00	<1.00	<0.02	<0.02	<0.02	<0.02	<0.10	<0.10	<0.06	<0.06	<0.03	<0.03	<0.02	<0.02
09/24/98	Channel	14+00	<2.50	<2.50	< 0.04	<0.04	<0.02	<0.02	<0.10	<0.10	<0.06	<0.06	<0.03	<0.03	<0.10	<0.10
	Channel	34+00	<2.50	<2.50	<0.04	<0.04	<0.02	<0.02	<0.10	<0.10	<0.06	<0.06	<0.03	<0.03	<0.10	<0.10
09/24/98	Channel	54+00	<2.50	<2.50	<0.04	<0.04	<0.02	<0.02	<0.10	<0.10	<0.06	<0.06	<0.03	<0.03	<0.10	<0.10
	Channel	74+00	<2.50	<2.50	<0.04	<0.04	<0.02	<0.02	<0.10	<0.10	<0.06	<0.06	<0.03	<0.03	<0.10	<0.10
09/24/98	Channel	84+00	<2.50	<2.50	<0.04	<0.04	<0.02	<0.02	<0.10	<0.10	<0.06	<0.06	<0.03	<0.03	<0.10	<0.10
Bayport Cha	nnel												A			
09/22/94	Channel	38+00			<0.04	<0.04	<0.02	<0.02	<0.14	<0.14	<0.06	<0.06	< 0.03	<0.03	<0.02	<0.02
09/22/94	Channel	50+00			<0.04	<0.04	<0.02	<0.02	<0.14	<0.14	<0.06	<0.06	<0.03	<0.03	<0.02	<0.02
09/22/94	Channel	100+00			<0.04	<0.04	<0.02	<0.02	<0.14	<0.14	<0.06	<0.06	<0.03	<0.03	<0.02	<0.02
09/22/94	Channel	150 + 00			<0.04	<0.04	<0.02	<0.02	<0.14	<0.14	<0.06	<0.06	< 0.03	<0.03	<0.02	<0.02
09/22/94	Channel	200+00			<0.04	<0.04	<0.02	<0.02	<0.14	<0.14	<0.06	<0.06	<0.03	<0.03	<0.02	<0.02
03/06/97	Channel	150+00	<1.00	<1.00	<0.04	<0.04	<0.02	<0.02	<0.10	<0.10	<0.6	<0.6	<0.03	<0.03	<0.02	<0.02
03/06/97	Channel	200+00	<1.00	<1.00	<0.04	<0.04	<0.02	<0.02	<0.10	<0.10	<0.6	<0.6	<0.03	<0.03	<0.02	<0.02
03/03/98	Channel	38+00			<0.04	<0.04	<0.02	<0.02	<0.1	<0.1	<0.06	<0.06	<0.03	<0.03	<0.1	<0.
03/03/98	Channel	58+00			<0.04	<0.04	<0.02	<0.02	<0.1	<0.1	<0.06	<0.06	<0.03	<0.03	<0.1	<0.
03/03/98	Channel	100+00			<0.04	<0.04	<0.02	<0.02	<0.1	<0.1	<0.06	<0.06	<0.03	<0.03	<0.1	<0.1
03/03/98	Channel	150+00			<0.04	<0.04	<0.02	<0.02	<0.1	<0.1	<0.06	<0.06	<0.03	<0.03	<0.1	<0.
	Channel	200+00			<0.04	<0.04	<0.02	<0.02	<0.1	<0.1	<0.06	<0.06	<0.03	<0.03	<0.1	<0.
	Channel	100+00	<2.00	<2.00	<0.04	<0.04	<0.02		<0.10	<0.10	<0.06	<0.06	<0.03	<0.03	<0.05	<0.0
	Channel	150+00	<2.00	<2.00	<0.04	<0.04	<0.02	<0.02	<0.10	<0.10	<0.06	<0.06	<0.03	<0.03	<0.05	<0.0
	Channel	200+00	<2.00	<2.00	<0.04	<0.04	<0.02	<0.02	<0.10	<0.10	<0.06	<0.06	<0.03	<0.03	<0.05	<0.0

 $\label{eq:concluded} \textbf{LSACE Water and Elutriate Concentrations } (\mu g/L) \ \text{for Barbours Cut and Bayport Channels}$

Date	Reach	Station	TotPet	rolHC	TotPh	enols	TotSu	lfides	Amm	ionia
			Water	Elutriate	Water	Elutriate	Water	Elutriate	Water	Elutriate
	Mai	rine Acute Criteria								
Barbours Cut C	hannel		İ							***************************************
02/29/92	Channel	14+00			1					
	Channel	24+00							-	
02/29/92	Channel	34+00								
	Channel	44+00								
	Channel	54+00								
02/29/92	Channel	64+00								
	Channel	74+00								
	Channel	84+00								
	Channel	84+00								
	Channel	14+00								
	Channel	24+00	1	the state of the s						
	Channel	34+00								,-,-,-
	Channel	44+00								
	Channel	54+00				7,1	-			
	Channel	64+00								
	Channel	74+00								
	Channel	84+00								
	Channel	84+00								
	Channel	14+00	<100.	<100.	<50.0	<50.0	<0.10	<0.10	0.13	0.5
	Channel	34+00	<100.	<100.	<50.0	<50.0	<0.10	<0.10	0.13	1.5
	Channel	54+00	<100.	<100.	<50.0	<50.0	<0.10	<0.10	0.13	2.1
	Channel	74+00	<100.	<100.	<50.0	<50.0	<0.10	<0.10	0.14	0.0
	Channel	84+00	<100.	<100.	<50.0	<50.0	<0.10	<0.10	0.14	0.8
09/24/98	Channel	14+00	<100	<100	<50.0	<50.0	<0.10	<0.10	<0.03	2.2
	Channel	34+00	<100	<100	<50.0	<50.0	<0.10	<0.10	<0.03	4.9
09/24/98	Channel	54+00	<100	<100	<50.0	<50.0	<0.10	<0.10	<0.03	1.3
09/24/98	Channel	74+00	<100	<100	<50.0	<50.0	<0.10	<0.10	<0.03	2.1
09/24/98	Channel	84+00	<100	<100	<50.0	<50.0	<0.10	<0.10	<0.03	4.4
Bayport Chan	nel				-					
09/22/94	Channel	38+00	<100.0	<100.0	<50.0	<50.0				
	Channel	50+00	<100.0	<100.0	<50.0	<50.0				
09/22/94	Channel	100+00	<100.0	<100.0	<50.0	<50.0				
	Channel	150+00	<100.0	<100.0	<50.0	<50.0			***************************************	***************************************
	Channel	200+00	<100.0	<100.0	<50.0	<50.0				
	Channel	150+00	10300	<100	<50.0	<50.0	<0.10	<0.10	0.28	<0.0
	Channel	200+00	10300	160	<50.0	<50.0	<0.10	<0.10	0.28	<0.0
	Channel	38+00			<10.0	<10.0				
	Channel	58+00			<10.0	<10.0				
	Channel	100+00			<10.0	<10.0		~		
	Channel	150+00			<10.0	<10.0				
	Channel	200+00			<10.0	<10.0				
	Channel	100+00	-				1			
	Channel	150+00				·				
	Channel	200+00								

Table D-3a
USACE Water and Elutriate Concentrations (µg/L) for HSC Red Fish Reef to Morgan's Point, 1989-1994

Date	Reach	Station	Arso	enic	Bari	um	Cadn	nium	Chro	nium	Cop	per	Le	ad	Mer	cury
			Water	Elutriate	Water	Elutriate	Water	Elutriate	Water	Elutriate	Water	Elutriate	Water	Elutriate	Water	Elutriate
ľ	Marine Acu	ite Criteria	149		į		45.4				13.5		133		2.1	
06/15/89	Channel	5+000	BDL	BDL			BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
06/15/89	Channel	7+500	BDL				BDL		BDL		BDL		BDL		<u>BDL</u>	
06/15/89	Channel	7+500	BDL	BDL			BDL	BDL	BDL	BDL	<u>BDL</u>	BDL	BDL	BDL	<u>BDL</u>	BDL
06/15/89	Channel	10+000	BDL	BDL			BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
06/15/89	Channel	15+000	BDL	BDL		_	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
06/15/89	Channel	20+000	BDL	BDL			BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
06/15/89	Channel	25+000	BDL	BDL			BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
06/15/89	Channel	30+000	BDL	BDL			BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
06/15/89	Channel	35+000	BDL	BDL			BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
06/15/89	Channel	35+000	BDL				BDL		BDL		BDL		BDL		BDL	
06/15/89	Channel	35+000	BDL	BDL			BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
06/15/89	Channel	40+000	BDL	BDL			BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
06/15/89	Channel	45+000	BDL	BDL			BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
06/15/89	Channel	50+000	BDL	BDL			BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
06/15/89	Channel	55+000	BDL	BDL			BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
06/15/89	Channel	60+000	BDL	BDL			BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
06/15/89	Channel	60+000	BDL				BDL		BDL		BDL		BDL		BDL	
06/15/89	Channel	60+000	BDL	BDL			BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
06/15/89	Channel	65+000	BDL	BDL	Ĭ.		BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
06/15/89	Channel	70+000	BDL	BDL			BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
06/15/89	Channel	<u>75+000</u>	BDL	BDL			BDL	BDL	<u>BDL</u>	BDL	<u>BDL</u>	BDL	BDL	BDL	BDL	BDL
12/16/93	Channel	0+000	BDL	BDL	78.4	232.0	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
12/16/93		5+000	BDL	BDL	64.3	199.0	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
12/16/93	Channel	10+000	<u>BDL</u>	BDL	62.6	77.0	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
12/16/93		15+000	BDL	BDL	65.1	202.0	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
12/16/93	Channel	20+000	BDL	BDL	62.2	158.0	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
12/16/93	Channel	25+000	BDL	BDL	<u>61.5</u>	239.0	BDL	BDL	<u>BDL</u>	BDL	BDL	BDL	BDL	BDL	BDL	BDL
12/16/93	Channel	30+000	BDL	BDL	58.7	68.2	<u>BDL</u>	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
02/16/94	Channel	35+000	BDL	BDL	60.7	72.4	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
02/16/94	Channel	<u>35+000</u>	BDL		57.8		BDL		BDL		BDL		BDL		BDL	
02/16/94		35+000	BDL	BDL	62.7	65.4	<u>BDL</u>	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
02/16/94	Channel	40+000	BDL	BDL	51.1	61.0	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
02/16/94	Channel	45+000	BDL	BDL	58.2	59.0	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
02/16/94	Channel	50+000	BDL	BDL	54.2	62.3	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
02/16/94	Channel	55+000	BDL	BDL	52.5	89.1	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
02/16/94	Channel	55+000	BDL		61.7		BDL		BDL		BDL		BDL		BDL	
02/16/94		55+000	BDL	BDL	55.4	67.5	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
02/16/94	Channel	60+000	BDL	BDL	57.0	57.1	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
02/16/94	Channel	65+000	BDL	BDL	49.2	48.0	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
02/16/94	Channel	70+000	BDL	BDL	<u>51.3</u>	57.0	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
02/16/94	Channel	75+000	BDL	BDL	70.0	63.0	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL

Table D-3a (Continued)
USACE Water and Elutriate Concentrations (µg/L) for HSC Red Fish Reef to Morgan's Point, 1989-1994

Date	Reach	Station	Nic	kel	Silv	ver	Seler	ium	Zi	nc	TO	C	Total	PCB	4,4'-	DDT
			Water	Elutriate	Water	Elutriate	Water	Elutriate	Water	Elutriate	Water	Elutriate	Water	Elutriate	Water	Elutriate
]	Marine Acı	ite Criteria	118		2		564		92.7				10		0.13	
06/15/89	Channel	5+000	BDL	BDL			BDL	BDL	BDL	BDL			BDL	BDL	BDL	BDL
06/15/89	Channel	7+500	BDL				BDL		BDL				BDL		BDL	
06/15/89	Channel	7+500	BDL	BDL			BDL	BDL	BDL	BDL			BDL	BDL	BDL	BDL
06/15/89	Channel	10+000	BDL	BDL			BDL	BDL	BDL	BDL			BDL	BDL	BDL	BDL
06/15/89	Channel	15+000	BDL	BDL			BDL	BDL	BDL	BDL			BDL	BDL	BDL	BDL
06/15/89	Channel	20+000	BDL	BDL			BDL	BDL	BDL	BDL			BDL	BDL	BDL	BDL
06/15/89	Channel	25+000	BDL	BDL			BDL	BDL	BDL	BDL			BDL	BDL	BDL	BDL
06/15/89	Channel	30+000	BDL	BDL			BDL	BDL	BDL	BDL			BDL	BDL	BDL	BDL
06/15/89	Channel	35+000	BDL	BDL			BDL	BDL	BDL	BDL			BDL	BDL	BDL	BDL
06/15/89	Channel	35+000	BDL				BDL		BDL				BDL		BDL	
	Channel	35+000	BDL	BDL	- Control of the Cont		BDL	BDL	BDL	BDL			BDL	BDL	BDL	BDL
06/15/89	Channel	40+000	BDL	BDL			BDL	BDL	BDL	BDL			BDL	BDL	BDL	BDL
06/15/89	Channel	45+000	BDL	BDL			BDL	BDL	BDL	BDL			<u>BDL</u>	BDL	BDL	BDL
06/15/89	Channel	50+000	BDL	BDL			BDL	BDL	BDL	BDL			BDL	BDL	BDL	BDL
06/15/89	Channel	55+000	BDL	BDL			BDL	BDL	BDL	BDL			BDL	BDL	BDL	BDL
	Channel	60+000	BDL	BDL			BDL	BDL	BDL	BDL			BDL	BDL	BDL	BDL
06/15/89	Channel	60+000	BDL				BDL		BDL				<u>BDL</u>		BDL	
06/15/89	Channel	60+000	BDL	BDL			BDL	BDL	BDL	BDL			BDL	<u>BDL</u>	BDL	BDL
	Channel	65+000	BDL	BDL			BDL	BDL	BDL	BDL			BDL	BDL	BDL	BDL
06/15/89	Channel	70+000	BDL	BDL			BDL	BDL	BDL	BDL			BDL	<u>BDL</u>	BDL	BDL
	Channel	75+000	BDL	BDL			BDL	BDL	BDL	BDL			BDL	BDL	BDL	BDL
12/16/93	Channel	0+000	BDL	BDL	BDL	BDL	BDL	BDL	<u>6.9</u>	13.2	7.10	15.30	<u>BDL</u>	BDL	BDL	BDL
12/16/93	Channel	5+000	BDL	BDL	BDL	BDL	BDL	BDL	11.4	6.2	7.20	12.80	BDL	BDL	BDL	BDL
	Channel	10+000	BDL	BDL	BDL	BDL	BDL	BDL	1.4	6.5	10.70	10.70	BDL	BDL	BDL	BDL
12/16/93		15+000	BDL	BDL	BDL	BDL	BDL	BDL	2.8	7.2	8.50	14.50	BDL	BDL	BDL	BDL
	Channel	20+000	BDL	BDL	BDL	BDL	BDL	BDL	3.3	5.6	7.00	11.40	BDL	BDL	BDL	BDL
	Channel	25+000	BDL	BDL	BDL	BDL	BDL	BDL	3.1	9.6	8.20	9.10	BDL	BDL	BDL	BDL
	Channel	30+000	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	9.10	5.60	BDL	BDL	BDL	BDL
	Channel	35+000	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	9.15	8.80	BDL	BDL	BDL	BDL
	Channel	35+000	BDL		BDL		BDL		BDL		11.00		BDL		BDL	
	Channel	35+000	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	11.40	8.40	BDL	BDL	BDL	BDL
	Channel	40+000	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	4.85	10.10	BDL	BDL	<u>BDL</u>	BDL
	Channel	45+000	BDL	BDL	BDL	BDL	<u>BDL</u>	BDL	BDL	BDL	6.05	8.25	BDL	BDL	BDL	BDL
	Channel	50+000	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	6.50	21.70	BDL	BDL	BDL	BDL
	Channel	55+000	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	<u>8.05</u>	13.15	BDL	BDL	<u>BDL</u>	BDL
	Channel	55+000	BDL		BDL		BDL		BDL		6.25		BDL		BDL	
	Channel	<u>55+000</u>	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	9.00	12.60	<u>BDL</u>	BDL	BDL	BDL
	Channel	60+000	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	10.90	10.70	BDL	BDL	BDL	BDL
	Channel	65+000	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	6.40	12.20	BDL	BDL	<u>BDL</u>	BDL
	Channel	70+000	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	9.90	9.95	BDL	BDL	BDL	BDL
02/16/94	Channel	75+000	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	8.60	14.20	BDL	BDL	BDL	BDL

Table D-3a (Continued)
USACE Water and Elutriate Concentrations (μg/L) for HSC Red Fish Reef to Morgan's Point, 1989-1994

Date	Reach	Station	Chlor	dane	Toxar	hene	Total	PAH	Napht	halene	Acena	hthene	Fluora	nthene	Benzo(a	a)pyrene
			Water	Elutriate	Water	Elutriate	Water	Elutriate	Water	Elutriate	Water	Elutriate	Water	Elutriate	Water	Elutriate
<u>N</u>	Aarine Acı	ıte Criteria	0.09		0.21											
06/15/89	Channel	5+000	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
06/15/89	Channel	7+500	BDL		BDL	~~~	BDL		BDL		BDL		BDL		BDL	
06/15/89	Channel	7+500	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
06/15/89	Channel	10+000	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
06/15/89	Channel	15+000	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
06/15/89	Channel	20+000	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
06/15/89	Channel	25+000	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
06/15/89	Channel	30+000	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
06/15/89	Channel	35+000	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
06/15/89	Channel	35+000	BDL		BDL		BDL		BDL		BDL		BDL		BDL	
06/15/89	Channel	35+000	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
06/15/89	Channel	40+000	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
06/15/89	Channel	45+000	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
06/15/89		50+000	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
06/15/89	Channel	55+000	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
06/15/89		60+000	BDL	BDL	BDL	BDL	<u>BDL</u>	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
06/15/89		60+000	BDL		BDL		BDL		BDL		BDL		BDL		BDL	
06/15/89	Channel	60+000	BDL	BDL	BDL	BDL	BDL	BDL	<u>BDL</u>	BDL	BDL	BDL	BDL	BDL	BDL	BDL
06/15/89		65+000	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
06/15/89	Channel	70+000	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
06/15/89		75+000	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
12/16/93		0+000	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
12/16/93		5+000	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
12/16/93		10+000	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
12/16/93		15+000	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
12/16/93		20+000	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
12/16/93		25+000	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
12/16/93		30+000	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
02/16/94		35+000	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
02/16/94		35+000	BDL		BDL		BDL		BDL		<u>BDL</u>		BDL		BDL	
02/16/94		35+000	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
02/16/94		40+000	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	<u>BDL</u>	BDL
02/16/94		45+000	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	+
02/16/94		50+000	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
02/16/94		55+000	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
02/16/94		55+000	BDL		BDL		BDL		BDL		BDL		BDL		<u>BDL</u>	
02/16/94		55+000	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
02/16/94		60+000	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
02/16/94		<u>65+000</u>	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	
02/16/94		70+000	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	
02/16/94	Channel	75+000	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL

Table D-3a (Continued)
USACE Water and Elutriate Concentrations (µg/L) for HSC Red Fish Reef to Morgan's Point, 1989-1994

Date	Reach	Station	Benzo(e	e)pyrene	Acenapl	thylene	Fluo	rene	Phenar	threne	Anthr	acene	Pyr	rene	Benzo(a)an	thracene
			Water	Elutriate	Water	Elutriate	Water	Elutriate	Water	Elutriate	Water	Elutriate	Water	Elutriate	Water	Elutriate
I	Marine Acı	ute Criteria							7.7							
06/15/89	Channel	5+000			BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
06/15/89	Channel	7+500			BDL		BDL		BDL		BDL		BDL		BDL	the state of the same of the s
06/15/89	Channel	7+500			BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
06/15/89	Channel	10+000			BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
06/15/89	Channel	15+000	***************************************		BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
06/15/89	Channel	20+000			BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
06/15/89	Channel	25+000	144000		BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
06/15/89	Channel	30+000			BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
06/15/89	Channel	35+000			BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
06/15/89	Channel	35+000			BDL		BDL		BDL		BDL		BDL		BDL	
06/15/89	Channel	35+000			BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
06/15/89	Channel	40+000	- Cameron		BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
06/15/89	Channel	45+000			BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
06/15/89	Channel	50+000			BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
06/15/89	Channel	55+000			BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
06/15/89	Channel	60+000			BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
06/15/89	Channel	60+000			BDL		BDL		BDL		BDL		BDL		BDL	
06/15/89	Channel	60+000			BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
06/15/89	Channel	65+000			BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
06/15/89	Channel	70+000		_	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
06/15/89		75+000			BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
12/16/93	Channel	0+000	.,													
		5+000														
12/16/93		10+000							.,							
12/16/93		<u>15+000</u>					_							<u> </u>		
12/16/93		20+000	~~~													
12/16/93		25+000														
12/16/93		30+000														
02/16/94		35+000														
		35+000														
02/16/94		35+000														
02/16/94	towns	40+000														
02/16/94		45+000														
02/16/94		50+000							*							
02/16/94		55+000														
02/16/94		<u>55+000</u>						ļ l								
02/16/94		55+000				[
02/16/94		60+000									i					
02/16/94		65+000														
02/16/94		70+000														
02/16/94	Channel	75+000														

Table D-3a (Continued)
USACE Water and Elutriate Concentrations (μg/L) for HSC Red Fish Reef to Morgan's Point, 1989-1994

Date	Reach	Station	Chry	/sene	Benzo(b)flu	oranthene	Benzo(k)flu	oranthene	Benzo(ghi)perylene	Dibenzo(ah)	anthracene	Indeno(123	cd)pyrene
			Water	Elutriate	Water	Elutriate	Water	Elutriate	Water	Elutriate	Water	Elutriate	Water	Elutriate
	Marine Ac	ute Criteria												
06/15/89	Channel	5+000	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
06/15/89	Channel	7+500	BDL		BDL		BDL		BDL		BDL	11.000000000	BDL	
06/15/89	Channel	7+500	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
06/15/89		10+000	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
06/15/89	Channel	15+000	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
06/15/89	Channel	20+000	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
06/15/89	Channel	25+000	BDL	BDL	BDL	BDL	.94	BDL	BDL	BDL	BDL	BDL	BDL	BDL
06/15/89	Channel	30+000	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
06/15/89	Channel	35+000	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
06/15/89	Channel	35+000	BDL		BDL		BDL		BDL		BDL		BDL	
06/15/89	Channel	35+000	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
06/15/89		40+000	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
06/15/89	Channel	45+000	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
06/15/89	Channel	50+000	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
06/15/89	Channel	55+000	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
06/15/89	Channel	60+000	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
06/15/89	Channel	60+000	BDL		BDL		BDL		BDL		BDL		BDL	
06/15/89	Channel	60+000	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
06/15/89	Channel	65+000	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
06/15/89	Channel	70+000	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
06/15/89		75+000	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
12/16/93	Channel	0+000												***************************************
12/16/93		5+000												-
12/16/93	Channel	10+000												
12/16/93	Channel	15+000					2000							***************************************
12/16/93		20+000					A parameter							
12/16/93		25+000												
12/16/93	Channel	30+000												
02/16/94		35+000										_		
02/16/94		35+000												
02/16/94		35+000												***************************************
02/16/94		40+000												
02/16/94		45+000												
02/16/94		50+000								_				
02/16/94		55+000												
02/16/94		<u>55+000</u>												
02/16/94		55+000												
02/16/94		60+000												
02/16/94		65+000												
02/16/94		<u>70+000</u>												
02/16/94	Channel	75+000												·

Table D-3a (Continued)
USACE Water and Elutriate Concentrations (µg/L) for HSC Red Fish Reef to Morgan's Point, 1989-1994

Date	Reach	Station	TotPe	sticides	Ald	lrin	Die	ldrin	Endo	sulfan	En	drin	Hept	achlor	Hexachlor	ocyclohexane
			Water	Elutriate	Water	Elutriate	Water	Elutriate	Water	Elutriate	Water	Elutriate	Water	Elutriate	Water	Elutriate
1	Marine Acu	te Criteria			1.3		0.71		0.034		0.037		0.053		0.16	
06/15/89	Channel	5+000														
06/15/89	Channel	7+500														
	Channel	7+500									101000000000000000000000000000000000000					
	Channel															
06/15/89	Channel	15+000			- /444/		Manager 1									
06/15/89	Channel	20+000												1		
		25+000			***************************************						, , , , , , , , , , , , , , , , , , , ,					
06/15/89	Channel	30+000														
06/15/89		35+000	*********									1				
06/15/89	Channel	35+000			M. Annaco voc		A A Name of the State of the St				200					
06/15/89	Channel	35+000														
06/15/89	Channel	40+000								İ						
06/15/89	Channel	45+000														
06/15/89	Channel	50+000														
06/15/89	Channel	55+000														
06/15/89	Channel	60+000														
06/15/89	Channel	60+000														
06/15/89	Channel	60+000														
06/15/89	Channel	65+000														
06/15/89	Channel	70+000														
06/15/89		75+000														
12/16/93	Channel	0+000					i 									
VVII	Channel															
	Channel	10+000														
12/16/93		15+000										<u> </u>				
	Channel	i														
	Channel	I														
	Channel	30+000														
02/16/94		35+000								<u> </u>						
	Channel						***************************************									
02/16/94		35+000														
	Channel		emonorator		er.,		And the second s								******	
	Channel															
		50+000		ļ.,												
	Channel									1						
	Channel						- 4									
02/16/94		55+000					1000000									
02/16/94		60+000														
02/16/94		65+000								ļ						
02/16/94		70+000														
02/16/94	Channel	75+000														

Table D-3a (Concluded)
USACE Water and Elutriate Concentrations (µg/L) for HSC Red Fish Reef to Morgan's Point, 1989-1994

Date	Reach	Station	TotPe	trolHC	TotP	henols	TotS	ulfides	Am	monia
	Vertical and the second		Water	Elutriate	Water	Elutriate	Water	Elutriate	Water	Elutriate
1	Marine Ac	ute Criteria								
06/15/89	Channel	5+000	<u></u>							
06/15/89	Channel	7+500								
06/15/89	Channel	7+500								
06/15/89	Channel	10+000								
06/15/89	Channel	15+000								
06/15/89	Channel	20+000	The second		1177					
06/15/89	Channel	25+000								
06/15/89	Channel	30+000			***************************************				***************************************	
06/15/89	Channel	35+000								
06/15/89	Channel	35+000			The same of the sa					
06/15/89	Channel	35+000								-
06/15/89	Channel	40+000	4.000.000							
06/15/89	Channel	45+000	***************************************		4					
06/15/89	Channel	50+000								1
06/15/89	Channel	55+000					***************************************			
06/15/89	Channel	60+000			44.000		scarre,	İ		
06/15/89	Channel	60+000			***************************************		***************************************	17	141421100 00000	
06/15/89	Channel	60+000	* work	- Control of the cont	100000					1
06/15/89	Channel	65+000								
06/15/89	Channel	70+000					***************************************			
06/15/89	Channel	75+000			***************************************					
12/16/93	Channel	0+000								
12/16/93	Channel	5+000								
12/16/93	Channel	10+000								
12/16/93	Channel	15+000				***************************************			***************************************	1
12/16/93	Channel	20+000	- married of							
12/16/93	Channel	25+000								-
12/16/93	Channel	30+000						1		
02/16/94	Channel	35+000								
02/16/94	Channel	35+000								
02/16/94	Channel	35+000								
02/16/94	Channel	40+000								
02/16/94	Channel	45+000				-				
02/16/94	Channel	50+000								
02/16/94	Channel	55+000								1
02/16/94	Channel	55+000								1
02/16/94	Channel	55+000						 		
02/16/94	Channel	60+000								1
02/16/94		65+000			*					1
02/16/94		70+000								<u> </u>
02/16/94		75+000				†			***************************************	

Table D-3b
USACE Water and Elutriate Concentrations (µg/L) for HSC Red Fish Reef to Morgan's Point, 1997-1999

Date	Reach	Station	Arse	nic	Bar	ium	Cadn	nium	Chroi	nium	Cop	per	Le	ad	Mer	cury
			Water	Elutriate	Water	Elutriate	Water	Elutriate	Water	Elutriate	Water	Elutriate	Water	Elutriate	Water	Elutriate
	Marine Ac	ute Criteria	149				45.4				13.5		133		2.1	
03/06/97	Channel	25+000	<1.0	<1.0	52.9	49.7	0.9	0.72	3.34	<1.0	3.53	1.08	<1.0	<1.0	<0.2	<0.20
03/06/97	Channel	30+000	<1.0	<1.0	53.6	65.0	1.21	1.27	<1.0	<1.0	2.12	1.08	<1.0	<1.0	<0.2	<0.20
10/27/97	Channel	0+000	<5.0	<5.0	73.0	177.0	<1.0	<1.0	<10.0	<10.0	<1.0	<1.0	<3.0	<3.0	<0.20	<0.20
10/27/97	Channel	5+000	<5.0	<5.0	74.0	159.0	<1.0	<1.0	<10.0	<10.0	6.0	<1.0	<3.0	<3.0	<0.20	<0.20
10/27/97	Channel	10+000	<5.0	<5.0	74.0	171.0	<1.0	<1.0	<10.0	<10.0	4.0	<1.0	<3.0	<3.0	<0.20	<0.20
10/27/97	Channel	15+000	<5.0	<5.0	73.0	156.0	<1.0	<1.0	<10.0	12.0	4.0	<1.0	<3.0	<3.0	<0.20	<0.20
10/27/97	Channel	20+000	<5.0	<5.0	76.0	90.0	<1.0	<1.0	<10.0	<10.0	11.0	<1.0	<3.0	<3.0	<0.20	<0.20
10/27/97	Channel	25+000	<5.0	<u><5.0</u>	73.0	116.0	<1.0	<1.0	<10.0	<10.0	3.0	<1.0	<3.0	<3.0	<0.20	<0.20
10/27/97	Channel	30+000	<5.0	<5.0	76.0	104.0	<1.0	<1.0	<10.0	<10.0	3.0	<1.0	<u><3.0</u>	<3.0	<0.20	<0.20
10/27/97	Channel	35+000	<5.0	<5.0	76.0	122.0	<1.0	<1.0	<10.0	<10.0	4.0	<1.0	<3.0	<3.0	<0.20	<0.20
10/27/97	Channel	35+000	<5.0		76.0		<1.0		<10.0		4.0		<3.0		<0.20	
10/27/97		35+000	<5.0	<5.0	80.0	71.0	<1.0	<1.0	<10.0	<10.0	4.0	<1.0	<3.0	<3.0	<0.20	<0.20
10/27/97		40+000	<5.0	<5.0	77.0	80.0	<1.0	<1.0	<10.0	<10.0	7.0	<1.0	<3.0	<3.0	<0.20	<0.20
10/27/97	Channel	45+000	<5.0	<5.0	75.0	129.0	<1.0	<1.0	<10.0	<10.0	4.0	<1.0	<3.0	<3.0	<0.20	<0.20
10/27/97	Channel	50+000	<5.0	<5.0	75.0	93.0	<1.0	<1.0	<10.0	<10.0	3.0	<1.0	<3.0	<3.0	<0.20	<0.20
10/27/97	Channel	55+000	<5.0	<5.0	76.0	80.0	<1.0	<1.0	<10.0	<10.0	3.0	<1.0	<3.0	<3.0	<0.20	<0.20
10/27/97	Channel	55+000	<5.0		82.0		<1.0		<10.0		4.0		<3.0		<0.20	
10/27/97	Channel	55+000	<5.0	<5.0	76.0	93.0	<1.0	<1.0	<10.0	<10.0	2.0	<1.0	<3.0	<3.0	<0.20	<0.20
10/27/97		60+000	<u><5.0</u>	<5.0	78.0	84.0	<1.0	<1.0	<10.0	<10.0	3.0	<1.0	<3.0	<3.0	<0.20	<0.20
10/27/97	Channel	65+000	<5.0	<5.0	77.0	83.0	<u><1.0</u>	<1.0	<10.0	<10.0	3.0	<1.0	<u><3.0</u>	<3.0	<0.20	<0.20
10/27/97		70+000	<5.0	<5.0	78.0	96.0	<1.0	<1.0	<10.0	<10.0	3.0	<1.0	<3.0	<3.0	<0.20	<0.20
10/27/97	Channel	75+000	<u><5.0</u>	<5.0	80.0	93.0	<1.0	<1.0	<10.0	<10.0	4.0	<1.0	<u><3.0</u>	<3.0	<0.20	<0.20
08/31/99		0+000	1.13	<1.00	70.5	254.0	0.10	0.10	1.61	<1.00	<u><1.00</u>	<1.00	<1.00	<1.00	<0.20	<0.20
08/31/99		5+000	<u>1.13</u>	<1.00	66.3	142.0	0.10	<0.10	1.13	<1.00	<u><1.00</u>	2.30	<1.00	<1.00	<0.20	<0.20
08/31/99	Channel	10+000	<1.00	<1.00	60.5	113.0	0.10	<0.10	<1.00	<1.00	<u><1.00</u>	<1.00	<u><1.00</u>	<1.00	<0.20	<0.20
08/31/99		15+000	<1.00	<1.00	55.2	98.7	0.20	<0.10	<1.00	<1.00	<1.00	<1.00	<u><1.00</u>	<1.00	<0.20	<u><0.20</u>
08/31/99		20+000	<1.00	<1.00	57.8	98.4	<u>0.10</u>	<0.10	<1.00	<1.00	<u><1.00</u>	<1.00	<1.00	<1.00	<0.20	<0.20
08/31/99		25+000	<1.00	<1.00	60.8	90.8	0.20	<0.10	1.50	<1.00	<1.00	<1.00	<u><1.00</u>	<1.00	<0.20	<0.20
08/31/99		30+000	<1.00	<1.00	65.1	114.0	<0.10	0.10	<1.00	<1.00	15.00	<1.00	<1.00	<1.00	<0.20	<0.20
08/31/99		35+000	<1.00	<1.00	66.2	96.5	<0.10	<0.10	<1.00	<1.00	<u><1.00</u>	<1.00	<1.00	<1.00	<0.20	<0.20
08/31/99		35+000	<1.00	<1.00	65.1	87.2	<0.10	0.10	<1.00	<1.00	<u><1.00</u>	<1.00	<1.00	<1.00	<0.20	<0.20
08/31/99		40+000	<1.00	<1.00	65.1	83.7	<0.10	0.10	<1.00	<1.00	<1.00	<u><1.00</u>	<1.00	<1.00	<0.20	<0.20
08/31/99		45+000	<1.00	<1.00	63.2	141.0	<0.10	0.20	1.53	<1.00	<1.00	<1.00	<1.00	<1.00	<0.20	<0.20
08/31/99		50+000	<1.00	<1.00	62.0	79.2	<0.10	0.10	<1.00	<1.00	<u><1.00</u>	<1.00	<1.00	<1.00	<u><0.20</u>	<0.20
08/31/99		55+000	<1.00	<1.00	<u>61.4</u>	86.2	<0.10	0.10	<1.00	<1.00	<u><1.00</u>	3.45	<1.00	<1.00	<0.20	<0.20
08/31/99		60+000	<1.00	<1.00	62.5	84.5	<0.10	0.10	<1.00	<1.00	<u><1.00</u>	<1.00	<u><1.00</u>	<1.00	<0.20	<0.20
08/31/99		60+000	<1.00	<1.00	58.5	73.2	<0.10	0.10	<1.00	<1.00	<u><1.00</u>	<1.00	<1.00	<1.00	<0.20	<0.20
08/31/99		60+000	<1.00		60.6		<0.10		<1.00		<1.00		<u><1.00</u>		<0.20	
08/31/99		65+000	<1.00	<1.00	61.7	97.5	<u>1.20</u>	0.10	<u><1.00</u>	<1.00	<u>1.00</u>	<1.00	<1.00	<1.00	<0.20	<0.20
08/31/99		70+000	<1.00	<1.00	62.9	75.5	0.10	0.10	<1.00	<1.00	<u><1.00</u>	<1.00	<u>11.00</u>	<1.00	<0.20	<0.20
08/31/99	Channel	75+000	<1.00	<1.00	59.9	88.5	<0.10	0.10	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<0.20	<0.20

Table D-3b (Continued)
USACE Water and Elutriate Concentrations (μg/L) for HSC Red Fish Reef to Morgan's Point, 1997-1999

Date	Reach	Station	Nic	kel	Silv	er	Selen	ium	Zi	nc	TC	C	Total	PCB	4,4'-	DDT
			Water	Elutriate	Water	Elutriate	Water	Elutriate	Water	Elutriate	Water	Elutriate	Water	Elutriate	Water	Elutriate
1	Marine Acı	ite Criteria	118		2		564		92.7				10		0.13	
03/06/97	Channel	25+000	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	7.3	18.5	5.45	<1.00	<0.01	<0.01	<0.10	<0.10
03/06/97	Channel	30+000	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	4.9	15.2	7.48	<1.00	<0.01	<0.01	<0.10	<0.10
10/27/97	Channel	0+000	<10.0	<10.0	<1.0	<1.0	<1.0	<1.0	<10.0	<10.0			<0.10	<0.10	<0.02	<0.02
10/27/97	Channel	5+000	<10.0	<10.0	<1.0	<1.0	<1.0	<1.0	<10.0	<10.0			<0.10	<0.10	<0.02	<0.02
10/27/97	Channel	10+000	<10.0	<10.0	<1.0	<1.0	<1.0	<1.0	<10.0	<10.0			<0.10	<0.10	<0.02	<0.02
10/27/97	Channel	15+000	<10.0	<10.0	<1.0	<1.0	<1.0	<1.0	<10.0	<10.0			<0.10	<0.10	<0.02	<0.02
10/27/97	Channel	20+000	<10.0	<10.0	<1.0	<1.0	<1.0	<1.0	<10.0	<10.0			<0.10	<0.10	<0.02	<0.02
10/27/97	Channel	25+000	<10.0	<10.0	<1.0	<1.0	<1.0	<1.0	<10.0	<10.0			<0.10	<0.10	<0.02	<0.02
10/27/97	Channel	30+000	<10.0	<10.0	<1.0	<1.0	<1.0	<1.0	<10.0	11			<0.10	<0.10	<0.02	<0.02
10/27/97		35+000	<10.0	<10.0	<1.0	<1.0	<1.0	<1.0	<10.0	<10.0			<0.10	<0.10	<0.02	<0.02
10/27/97		35+000	<10.0		<1.0		<1.0		<10.0				<0.10		<0.02	
10/27/97	Channel	35+000	<10.0	<10.0	<1.0	<1.0	<1.0	<1.0	<10.0	<10.0	-		<0.10	<0.10	<0.02	<0.02
10/27/97	Channel	40+000	<10.0	<10.0	<1.0	<1.0	<1.0	<1.0	<10.0	<10.0			<0.10	<0.10	<0.02	<0.02
10/27/97	Channel	45+000	<10.0	14.0	<1.0	<1.0	<1.0	<1.0	<10.0	<10.0			<0.10	<0.10	<0.02	<0.02
10/27/97	Channel	50+000	<10.0	<10.0	<1.0	<1.0	<1.0	<1.0	<10.0	<10.0			<0.10	<0.10	<0.02	<0.02
10/27/97	Channel	55+000	<10.0	<10.0	<1.0	<1.0	<1.0	<1.0	<10.0	<10.0			<0.10	<0.10	<0.02	<0.02
10/27/97	Channel	55+000	<10.0		<1.0		<1.0		<10.0				<0.10		<0.02	
10/27/97	Channel	55+000	<10.0	<10.0	<1.0	<1.0	<1.0	<1.0	<10.0	<10.0			<0.10	<0.10	<0.02	<0.02
10/27/97	Channel	60+000	<10.0	<10.0	<1.0	<1.0	<1.0	<1.0	<10.0	<10.0			<0.10	<0.10	<0.02	<0.02
10/27/97	Channel	65+000	<10.0	12.0	<1.0	<1.0	<1.0	<1.0	<10.0	<10.0			<0.10	<0.10	<0.02	<0.02
10/27/97	Channel	70+000	<10.0	<10.0	<1.0	<1.0	<1.0	<1.0	<10.0	<10.0			<0.10	<0.10	<0.02	<0.02
10/27/97	Channel	75+000	<10.0	<10.0	<1.0	<1.0	<1.0	<1.0	<10.0	<10.0			<u><0.10</u>	<0.10	<0.02	<0.02
08/31/99	Channel	0+000	<u><1.00</u>	<1.00	<1.00	<1.00	<1.00	5.12	5.40	2.80			<0.01	<0.01	<0.10	<0.10
08/31/99	Channel	5+000	<1.00	1.10	<1.00	<1.00	1.37	2.53	7.70	1.20			<0.01	<0.01	<0.10	<0.10
08/31/99	Channel	10+000	<1.00	<1.00	<1.00	<1.00	<1.00	3.33	6.60	1.20			<0.01	<0.01	<0.10	<0.10
08/31/99	Channel	15+000	<u><1.00</u>	<1.00	<1.00	<1.00	1.63	2.96	4.70	1.50			<0.01	<0.01	<0.10	<0.10
08/31/99	Channel	20+000	<1.00	<1.00	<1.00	<1.00	1.08	3.97	11.30	1.90			<0.01	<0.01	<0.10	<0.10
08/31/99	Channel	25+000	<1.00	<1.00	<1.00	<1.00	1.04	4.14	4.40	2.20			<0.01	<0.01	<0.10	<0.10
08/31/99	Channel	30+000	<1.00	<1.00	<1.00	<1.00	1.84	4.78	34.60	<1.00			<0.01	<0.01	<0.10	<0.10
08/31/99	Channel	35+000	<1.00	<1.00	<1.00	<1.00	1.36	3.70	6.80	2.60			<0.01	<0.01	<0.10	<0.10
08/31/99	Channel	35+000	<1.00	<1.00	<1.00	<1.00	2.00	7.74	6.20	<1.00			<0.01	<0.01	<0.10	<0.10
08/31/99	Channel	40+000	<1.00	<u><1.00</u>	<1.00	<1.00	<1.00	4.80	5.20	3.00			<0.01	<0.01	<0.10	<0.10
08/31/99	Channel	45+000	<1.00	<1.00	<1.00	<1.00	2.20	3.34	4.00	<1.00			<0.01	<0.01	<0.10	<0.10
08/31/99	Channel	50+000	<1.00	<1.00	<1.00	<1.00	2.03	4.15	4.10	2.00			<0.01	<0.01	<0.10	<0.10
08/31/99	Channel	55+000	<1.00	<1.00	<1.00	<1.00	<1.00	5.33	3.80	<1.00			<0.01	<0.01	<0.10	<0.10
08/31/99	Channel	60+000	<1.00	<1.00	<1.00	<1.00	2.55	3.76	5.00	1.20			<u><0.01</u>	<0.01	<0.10	<0.10
08/31/99	Channel	60+000	<u><1.00</u>	<1.00	<1.00	<1.00	<1.00	4.03	7.00	2.20			<0.01	<0.01	<0.10	<0.10
08/31/99		60+000	<1.00		<1.00		2.06		5.30				<0.01		<0.10	
08/31/99	Channel	65+000	<1.00	<1.00	<1.00	<1.00	<1.00	3.28	6.50	1.60			<0.01	<0.01	<0.10	<0.10
08/31/99		70+000	<1.00	<1.00	<1.00	<1.00	2.01	4.00	6.70	1.10			<0.01	<0.01	<0.10	<0.10
08/31/99	Channel	75+000	<1.00	<1.00	<1.00	<1.00	2.57	4.10	4.70	1.70			<0.01	<0.01	<0.10	<0.10

Table D-3b (Continued)
USACE Water and Elutriate Concentrations (µg/L) for HSC Red Fish Reef to Morgan's Point, 1997-1999

Date	Reach	Station	Chlor	dane	Toxaj	hene	Total	PAH	Napht	halene	Acenap	hthene	Fluora	nthene	Benzo(a)pyrene
			Water	Elutriate	Water	Elutriate	Water	Elutriate	Water	Elutriate	Water	Elutriate	Water	Elutriate	Water	Elutriate
	Marine Acı	ıte Criteria	0.09		0.21											
03/06/97	Channel	25+000	<0.14	<0.14	<0.50	<0.50	<5.00	<5.00	<2.0	<2.0	<2.0	<2.0	<0.50	<0.50	<0.50	<0.50
03/06/97	Channel	30+000	<0.14	<0.14	<0.50	<0.50	<5.00	<5.00	<2.0	<2.0	<2.0	<2.0	<0.50	<0.50	<0.50	<0.50
10/27/97	Channel	0+000	<0.10	<0.10	<0.50	<0.50	<5.00	<5.00	<2.00	<2.00	<1.50	<1.50	<0.50	<0.50	<0.50	<0.50
10/27/97	Channel	5+000	<0.10	<0.10	<0.50	<0.50	<5.00	<5.00	<2.00	<2.00	<1.50	<1.50	<0.50	<0.50	<0.50	<0.50
10/27/97	Channel	10+000	<0.10	<0.10	<0.50	<0.50	<5.00	<5.00	<2.00	<2.00	<1.50	<1.50	<0.50	<0.50	<0.50	<0.50
10/27/97	Channel	15+000	<0.10	<0.10	<0.50	<0.50	<5.00	<5.00	<2.00	<2.00	<1.50	<1.50	<0.50	<0.50	<0.50	<0.50
10/27/97	Channel	20+000	<0.10	<0.10	<0.50	<0.50	<5.00	<5.00	<2.00	<2.00	<1.50	<1.50	<0.50	<0.50	<0.50	<0.50
10/27/97	Channel	25+000	<0.10	<0.10	<0.50	<0.50	<5.00	<5.00	<2.00	<2.00	<1.50	<1.50	<0.50	<0.50	<0.50	<0.50
10/27/97	Channel	30+000	<0.10	<0.10	<0.50	<0.50	<5.00	<5.00	<2.00	<2.00	<1.50	<1.50	<0.50	<0.50	<0.50	<0.50
10/27/97	Channel	35+000	<0.10	<0.10	<0.50	<0.50	<5.00	<5.00	<2.00	<2.00	<1.50	<1.50	<0.50	<0.50	<0.50	<0.50
10/27/97	Channel	35+000	<0.10		<0.50		<5.00		<2.00		<1.50		<0.50		<0.50	
10/27/97	Channel	35+000	<0.10	<0.10	<0.50	<0.50	<u><5.00</u>	<5.00	<2.00	<2.00	<1.50	<1.50	<u><0.50</u>	<0.50	<0.50	<0.50
10/27/97	Channel	40+000	<0.10	<0.10	<0.50	<0.50	<5.00	<5.00	<2.00	<2.00	<1.50	<1.50	<0.50	<0.50	<0.50	<0.50
10/27/97	Channel	45+000	<0.10	<0.10	<0.50	<0.50	<5.00	<5.00	<2.00	<2.00	<1.50	<1.50	<0.50	<0.50	<0.50	<0.50
10/27/97	Channel	50+000	<0.10	<0.10	<0. <u>50</u>	<0.50	<5.00	<5.00	<2.00	<2.00	<1.50	<1.50	<0.50	<0.50	<0.50	<0.50
10/27/97	Channel	55+000	<0.10	<0.10	<0.50	<0.50	<5.00	<5.00	<2.00	<2.00	<1.50	<1.50	<0.50	<0.50	<0.50	<0.50
10/27/97	Channel	55+000	<0.10		<0.50		<5.00		<2.00		<1.50	-	<0.50		<0.50	
10/27/97	Channel	55+000	<0.10	<0.10	<0.50	<0.50	<5.00	<5.00	<2.00	<2.00	<1.50	<1.50	<0.50	<0.50	<0.50	<0.50
10/27/97	Channel	60+000	<0.10	<0.10	<0.50	<0.50	<5.00	<5.00	<2.00	<2.00	<1.50	<1.50	<0.50	<0.50	<0.50	<0.50
10/27/97	Channel	65+000	<0.10	<0.10	<0.50	<0.50	<5.00	<5.00	<2.00	<2.00	<1.50	<1.50	<0.50	<0.50	<0.50	<0.50
10/27/97	Channel	70+000	<0.10	<0.10	<0.50	<0.50	<u><5.00</u>	<5.00	<2.00	<2.00	<1.50	<1.50	<0.50	<0.50	<0.50	<0.50
10/27/97	Channel	75+000	<0.10	<0.10	<0.50	<0.50	<5.00	<5.00	<2.00	<2.00	<1.50	<1.50	<0.50	<0.50	<0.50	<0.50
08/31/99	Channel	0+000	<0.14	<0.14	<0.50	<0.50	<5.00	<5.00	<2.00	<2.00	<2.00	<2.00	<0.50	<0.50	<0.50	<0.50
08/31/99	Channel	5+000	<0.14	<0.14	<0.50	<0.50	<5.00	<5.00	<2.00	<2.00	<2.00	<2.00	<0.50	<0.50	<0.50	<0.50
08/31/99	Channel	10+000	<0.14	<0.14	<0.50	<0.50	<5.00	<5.00	<2.00	<2.00	<2.00	<2.00	<0.50	<0.50	<0.50	<0.50
08/31/99	Channel	15+000	<0.14	<0.14	<0.50	<0.50	<5.00	<5.00	<2.00	<2.00	<2.00	<2.00	<0.50	<0.50	<0.50	<0.50
08/31/99	Channel	20+000	<0.14	<0.14	<0.50	<0.50	<5.00	<5.00	<2.00	<2.00	<2.00	<2.00	<0.50	<0.50	<0.50	<0.50
08/31/99	Channel	25+000	<0.14	<0.14	<0.50	<0.50	<5.00	<5.00	<2.00	<2.00	<2.00	<2.00	<0.50	<0.50	<0.50	<0.50
08/31/99	Channel	30+000	<0.14	<0.14	<0.50	<0.50	<5.00	<5.00	<2.00	<2.00	<2.00	<2.00	<0.50	<0.50	<0.50	<0.50
08/31/99	Channel	35+000	<0.14	<0.14	<0.50	<0.50	<5.00	<5.00	<2.00	<2.00	<2.00	<2.00	<0.50	<0.50	<0.50	<0.50
08/31/99	Channel	35+000	<u><0.14</u>	<0.14	<0.50	<0.50	<5.00	<5.00	<2.00	<2.00	<2.00	<2.00	<0.50	<0.50	<0.50	<0.50
08/31/99	Channel	40+000	<0.14	<0.14	<0.50	<0.50	<5.00	<5.00	<2.00	<2.00	<2.00	<2.00	< 0.50	<0.50	<0.50	<0.50
08/31/99	Channel	45+000	<0.14	<0.14	<0.50	<0.50	<5.00	<5.00	<2.00	<2.00	<2.00	<2.00	<0.50	<0.50	<0.50	<0.50
08/31/99	Channel	50+000	<0.14	<0.14	<0.50	< 0.50	<5.00	<5.00	<2.00	<2.00	<2.00	<2.00	<0.50	<0.50	<0.50	<0.50
08/31/99	Channel	55+000	<0.14	<0.14	<0.50	<0.50	<5.00	<5.00	<2.00	<2.00	<2.00	<u><2.00</u>	<0.50	<0.50	<0.50	<0.50
08/31/99	Channel	60+000	<0.14	<0.14	<0.50	<0.50	<5.00	<5.00	<2.00	<2.00	<2.00	<2.00	<0.50	<0.50	<0.50	<0.50
08/31/99	Channel	60+000	<0.14	<0.14	<0.50	<0.50	<5.00	<5.00	<2.00	<2.00	<2.00	<2.00	<0.50	<0.50	<0.50	<0.50
08/31/99	Channel	60+000	<0.14		<0.50		<5.00		<2.00		<2.00		<0.50		<0.50	
08/31/99	Channel	65+000	<0.14	<0.14	<0.50	<u><0.50</u>	<5.00	<5.00	<2.00	<2.00	<2.00	<2.00	<0.50	<0.50	<0.50	<0.50
08/31/99	Channel	70+000	<0.14	<0.14	<0.50	<0.50	<5.00	<5.00	<2.00	<2.00	<2.00	<2.00	<0.50	<0.50	<0.50	<0.50
08/31/99	Channel	75+000	<0.14	<0.14	<0.50	<0.50	<5.00	<5.00	<2.00	<2.00	<2.00	<2.00	<0.50	<0.50	<0.50	<0.50

Table D-3b (Continued)
USACE Water and Elutriate Concentrations (µg/L) for HSC Red Fish Reef to Morgan's Point, 1997-1999

Date	Reach	Station	Benzo(e)pyrene	Acenaph	thylene	Fluo	rene	Phenan	threne	Anthr	acene	Pyr	rene	Benzo(a)an	thracene
			Water	Elutriate	Water	Elutriate	Water	Elutriate	Water	Elutriate	Water	Elutriate	Water	Elutriate	Water	Elutriate
Ň	Aarine Acı	ite Criteria							7.7							
03/06/97	Channel	25+000	<0.50	<0.50	<2.50	<2.50	<0.50	<0.50	<1.00	<1.00	<0.50	<0.50	<0.50	<0.50	<1.00	<1.00
03/06/97	Channel	30+000	<0.50	<0.50	<2.50	<2.50	<0.50	<0.50	<1.00	<1.00	<0.50	<0.50	<0.50	<0.50	<1.00	<1.00
10/27/97	Channel	0+000	<2.50	<2.50	<1.5	<1.5	<0.50	<0.50	<1.0	<1.0	<0.50	<0.50	<0.50	<0.50	<1.0	<1.0
10/27/97	Channel	5+000	<2.50	<2.50	<1.5	<1.5	<0.50	<0.50	<1.0	<1.0	<0.50	<0.50	<0.50	<0.50	<1.0	<1.0
10/27/97	Channel	10+000	<2.50	<2.50	<1.5	<1.5	<0.50	<0.50	<1.0	<1.0	<0.50	<0.50	<0.50	<0.50	<1.0	<1.0
10/27/97	Channel	15+000	<2.50	<2.50	<1.5	<1.5	<0.50	<0.50	<1.0	<1.0	<0.50	<0.50	<0.50	<0.50	<1.0	<1.0
10/27/97	Channel	20+000	<2.50	<2.50	<1.5	<1.5	<0.50	<0.50	<1.0	<1.0	<0.50	<0.50	<0.50	<0.50	<1.0	<1.0
10/27/97	Channel	25+000	<2.50	<2.50	<1.5	<1.5	<0.50	<0.50	<1.0	<1.0	<0.50	<0.50	<0.50	<0.50	<1.0	<1.0
10/27/97	Channel	30+000	<2.50	<2.50	<1.5	<1.5	<0.50	<0.50	<1.0	<1.0	<0.50	<0.50	<0.50	<0.50	<1.0	<1.0
10/27/97	Channel	35+000	<2.50	<2.50	<u><1.5</u>	<1.5	<0.50	<0.50	<1.0	<1.0	<0.50	<0.50	<0.50	<0.50	<1.0	<1.0
10/27/97	Channel	35+000	<2.50		<1.5	<1.5	<0.50	<0.50	<1.0	<1.0	<0.50	<0.50	<0.50	<0.50	<1.0	<1.0
10/27/97	Channel	35+000	<2.50	<2.50	<u><1.5</u>	<1.5	<0.50	<0.50	<u><1.0</u>	<1.0	<0.50	<0.50	<0.50	<0.50	<1.0	<1.0
10/27/97	Channel	40+000	<2.50	<2.50	<1.5	<1.5	<0.50	<0.50	<1.0	<1.0	<0.50	<0.50	<0.50	<0.50	<1.0	<1.0
10/27/97	Channel	45+000	<2.50	<2.50	<1.5	<1.5	<0.50	<0.50	<1.0	<1.0	<0.50	<0.50	<0.50	<0.50	<1.0	<1.0
10/27/97	Channel	50+000	<2.50	<2.50	_<1.5	<1.5	<0.50	<0.50	<1.0	<1.0	<0.50	<0.50	<0.50		<1.0	<1.0
10/27/97	Channel	55+000	<2.50	<2.50	<1.5	<1.5	<0.50	<0.50	<1.0	<1.0	<0.50	<0.50	<0.50	<0.50	<1.0	<1.0
10/27/97	Channel	55+000	<2.50		<u><1.5</u>	<1.5	<0.50	<0.50	<1.0	<1.0	<0.50	<0.50	<0.50	<0.50	<1.0	<1.0
10/27/97	Channel	55+000	<2.50	<2.50	<1.5	<1.5	<0.50	<0.50	<1.0	<1.0	<0.50	<0.50	<0.50	<0.50	<1.0	<1.0
10/27/97	Channel	60+000	<2.50	<2.50	<1.5	<u><1.5</u>	<0.50	<u><0.50</u>	<1.0	<1.0	<0.50	<0.50	<0.50	<0.50	<1.0	<1.0
10/27/97	Channel	65+000	<2.50	<2.50	<1.5	<u><1.5</u>	<0.50	<0.50	<1.0	<1.0	<0.50	<0.50	<0.50	<0.50	<1.0	<1.0
10/27/97	Channel	70+000	<2.50	<2.50	<u><1.5</u>	<1.5	<0.50	<0.50	<u><1.0</u>	<1.0	<0.50	<0.50	<0.50		<1.0	<1.0
10/27/97		75+000	<2.50	<2.50	<1.5	<1.5	<0.50	<0.50	<1.0	<1.0	<0.50	<0.50	<0.50	<0.50	<1.0	<1.0
08/31/99	Channel	0+000	<0.50	<0.50	<2.50	<2.50	<0.50	<0.50	<1.00	<1.00	<0.50	<0.50	<0.50		<1.50	<1.50
08/31/99	Channel	5+000	<0.50	<0.50	<2.50	<2.50	<0.50	<0.50	<1.00	<1.00	<0.50	<0.50	<0.50		<1.50	<1.50
08/31/99	Channel	10+000	<0.50	<0.50	<2.50	<2.50	<0.50	<0.50	<1.00	<1.00	<0.50	<0.50	<0.50		<1.50	<1.50
08/31/99		15+000	<0.50	<0.50	<2.50	<2.50	<0.50	<u><0.50</u>	<1.00	<1.00	<0.50	<0.50	<0.50		<u><1.50</u>	<1.50
08/31/99		20+000	<0.50	<0.50	<2.50	<2.50	<0.50	<0.50	<1.00	<1.00	<0.50	<0.50	<0.50		<u><1.50</u>	<1.50
08/31/99	Channel	25+000	<0.50	<0.50	<u><2.50</u>	<2.50	<0.50	<0.50	<1.00	<u><1.00</u>	<u><0.50</u>	<0.50	<0.50		<u><1.50</u>	<1.50
08/31/99		30+000	<0.50	<0.50	<2.50	<2.50	<u><0.50</u>		<1.00	<1.00	<0.50	<0.50	<0.50	+	<1.50	<1.50
08/31/99		35+000	<0.50	<0.50	<2.50	<2.50	<0.50	<0.50	<1.00	<1.00	<0.50	<0.50	<0.50		<1.50	<1.50
08/31/99		35+000	<0.50	<0.50	<2.50	<2.50	<0.50	<0.50	<1.00	<1.00	<0.50	<0.50	<0.50	1	<1.50	<1.50
08/31/99		40+000	<0.50	<0.50	<2.50	<2.50	<0.50	<0.50	<1.00	<1.00	<0.50	<0.50	<u><0.50</u>		<1.50	<u><1.50</u>
08/31/99		45+000	<0.50	<0.50	<2.50	<2.50	<0.50	<0.50	<1.00	<1.00	<0.50	<0.50	<0.50		<1.50	<1.50
08/31/99		50+000	<0.50	<0.50	<2.50	<2.50	<0.50	<0.50	<1.00	<1.00	<0.50	<0.50	<0.50		<u><1.50</u>	<1.50
08/31/99		55+000	<0.50	<0.50	<2.50	<2.50	<0.50		<1.00	<1.00	<0.50	<0.50	<0.50		<1.50	<1.50
08/31/99		60+000	<0.50	<0.50	<2.50	<2.50	<0.50		<1.00	<1.00	<0.50	<0.50	<0.50		<1.50	<1.50
08/31/99		60+000	<0.50	<0.50	<2.50	<2.50	<0.50		<1.00	<1.00	<0.50	<0.50	<0.50	+	<1.50	<1.50
08/31/99		<u>60+000</u>	<0.50		<2.50	<2.50	<0.50		<1.00	<1.00	<0.50	<0.50	<0.50		<1.50	<1.50
08/31/99		65+000	<0.50	<0.50	<2.50	<2.50	<0.50		<1.00	<1.00	<0.50	<0.50	<0.50		<u><1.50</u>	<1.50
08/31/99		70+000	<0.50	<0.50	<2.50	<2.50	<0.50		<1.00	<1.00	<0.50	<0.50	<0.50		<1.50	<1.50
08/31/99	Channel	75+000	<0.50	<0.50	<2.50	<2.50	<0.50	<0.50	<1.00	<1.00	<0.50	<0.50	<0.50	<0.50	<1.50	<1.50

Table D-3b (Continued)
USACE Water and Elutriate Concentrations (μg/L) for HSC Red Fish Reef to Morgan's Point, 1997-1999

Date	Reach	Station	Chry	sene	Benzo(b)flu	oranthene	Benzo(k)flu	oranthene	Benzo(ghi)	perylene	Dibenzo(ah)anthracene		Indeno(123cd)pyrene	
			Water	Elutriate	Water	Elutriate	Water	Elutriate	Water	Elutriate	Water	Elutriate	Water	Elutriate
Marine Acute Criteria											and the			
03/06/97	Channel	25+000	<0.50	<0.50	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.50	<0.50	<0.50	<0.50
03/06/97	Channel	30+000	<0.50	<0.50	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.50	<0.50	<0.50	<0.50
	Channel	0+000	<0.50	<0.50	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.50	<0.50	<0.50	<0.50
10/27/97	Channel	5+000	<0.50	<0.50	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.50	<0.50	<0.50	<0.56
10/27/97	Channel	10+000	<0.50	<0.50	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.50	<0.50	<0.50	<0.5
10/27/97	Channel	15+000	<0.50	<0.50	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.50	<0.50	<0.50	<0.5
10/27/97	Channel	20+000	<0.50	<0.50	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.50	<0.50	<0.50	<0.5
10/27/97	Channel	25+000	<0.50	<0.50	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.50	<0.50	<0.50	<0.5
10/27/97	Channel	30+000	<0.50	<0.50	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.50	<0.50	<0.50	<0.5
10/27/97	Channel	35+000	<0.50	<0.50	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.50	<0.50	<0.50	<0.5
10/27/97	Channel	35+000	<0.50	<0.50	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.50	<0.50	< 0.50	<0.5
	Channel	35+000	<0.50	<u><0.50</u>	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.50	<0.50	<0.50	<0.5
	Channel	40+000	<0.50	<0.50	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.50	<0.50	<0.50	<0.5
10/27/97	Channel	<u>45+000</u>	<0.50	<0.50	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.50	<0.50	<0.50	<0.5
10/27/97	Channel	50+000	<0.50	<0.50	<0.10	<u><0.10</u>	<u><0.10</u>	<0.10	<0.10	<0.10	<0.50	<0.50	<0.50	<0.5
	Channel	55+000	<0.50	<0.50	<0.10	<u><0.10</u>	<u><0.10</u>	<0.10	₹0.10	<0.10	<0.50	<0.50	<0.50	<0.5
10/27/97	Channel	<u>55+000</u>	<0.50	<0.50	<0.10	<0.10	<0.10	< 0.10	<0.10	<0.10	<0.50	<0.50	<0.50	<0.5
	Channel	55+000	<0.50	<0.50	<0.10	<u><0.10</u>	<0.10	<0.10	<0.10	<0.10	<0.50	<0.50	<0.50	<0.5
	Channel	60+000	<0.50	<0.50	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.50	<0.50	<0.50	<0.5
	Channel	65+000	<0.50	<0.50	<0.10	<u><0.10</u>	<0.10	<0.10	<u><0.10</u>	<0.10	<0.50	< 0.50	<0.50	<0.5
	Channel	70+000	<0.50	<0.50	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.50	< 0.50	<0.50	<0.5
THE RESIDENCE OF THE PARTY OF T	Channel	<u>75+000</u>	<0.50	<0.50	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.50	< 0.50	<0.50	<0.5
	Channel	0+000	<0.50	<0.50	<u><0.10</u>	<0.10	<0.10	<0.10	<u><0.10</u>	<0.10	<u><0.50</u>	<0.50	<u><0.50</u>	<0.5
	Channel	5+000	<u><0.50</u>	<0.50	<0.10	<0.10	<0.10	<u><0.10</u>	<0.10	<0.10	<0.50	< 0.50	<0.50	<0.5
	Channel	10+000	<0.50	<0.50	<0.10	<0.10	<0.10	<0.10	<u><0.10</u>	<0.10	<0.50	<0.50	<0.50	<0.5
	Channel	15+000	<0.50	<0.50	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.50	<0.50	<0.50	<0.5
	Channel	20+000	<0.50	<0.50	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.50	<0.50	<0.50	<0.5
	Channel	25+000	<0.50	<0.50	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.50	<0.50	<0.50	<0.5
	Channel	30+000	<0.50	<0.50	<0.10	<0.10	<0.10	<u><0.10</u>	<0.10	<0.10	<0.50	<0.50	<0.50	<0.5
	Channel	35+000	<0.50	<0.50	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<u><0.50</u>	<0.50	<0.50	<0.5
08/31/99		35+000	<0.50	<0.50	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.50	<0.50	<0.50	<0.5
	Channel	40+000	<0.50	<0.50	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.50	<0.50	<0.50	<0.5
	Channel	45+000	<0.50	<0.50	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.50	<0.50	<u><0.50</u>	<0.5
	Channel	<u>50+000</u>	<0.50	<0.50	<0.10	<0.10	<0.10	<0.10	<u><0.10</u>	<0.10	<0.50	<0.50	<0.50	<0.5
	Channel	55+000	<0.50	<0.50	<u><0.10</u>	<0.10	<0.10	<0.10	<0.10	<0.10	<0.50	<0.50	<0.50	<0.5
	Channel	<u>60+000</u>	<u><0.50</u>	<0.50	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<u><0.50</u>	<0.50	<0.50	<0.5
	Channel	60+000	<0.50	<0.50	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.50	<0.50	<0.50	<0.5
	Channel	60+000	<0.50	<0.50	<u><0.10</u>	<0.10	<u><0.10</u>	<0.10	<0.10	<0.10	<0.50	<0.50	<0.50	<0.5
	Channel	65+000	<0.50	<0.50	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.50	<0.50	<u><0.50</u>	<0.5
08/31/99	Channel	70+000	<0.50	<0.50	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.50	<0.50	<0.50	<0.5
08/31/99	Channel	75+000	<0.50	<0.50	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.50	<0.50	<0.50	<0.5

Table D-3b (Continued)
USACE Water and Elutriate Concentrations (µg/L) for HSC Red Fish Reef to Morgan's Point, 1997-1999

Date	Reach	Station	TotPesticides		Aldrin		Diele	Dieldrin		Endosulfan		Endrin		Heptachlor		Hexachlorocyclohexane	
			Water	Elutriate	Water	Elutriate	Water	Elutriate	Water	Elutriate	Water	Elutriate	Water	Elutriate	Water	Elutriate	
Marine Acute Criteria				1.3		0.71		0.034		0.037		0.053		0.16			
03/06/97	Channel	25+000	<1.00	<1.00	<0.04	<0.04	<0.02	<0.02	<0.10	<0.10	<0.6	<0.6	<0.03	<0.03	<0.02	<0.02	
03/06/97	Channel	30+000	<1.00	<1.00	<0.04	<0.04	<0.02	<0.02	<0.10	<0.10	<0.6	<0.6	<0.03	<0.03	<0.02	<0.02	
10/27/97	Channel	0+000	<2.00	<2.00	<0.03	<0.03	<0.02	<0.02	<0.10	<0.10	<0.04	<0.04	<0.02	<0.02	<0.05	<0.05	
10/27/97	Channel	5+000	<2.00	<2.00	<0.03	<0.03	<0.02	<0.02	<0.10	<0.10	<0.04	<0.04	<0.02	<0.02	<0.05	<0.05	
10/27/97	Channel	10+000	<2.00	<2.00	<0.03	<0.03	<0.02	<0.02	<0.10	<0.10	<0.04	<0.04	<0.02	<0.02	<0.05	<0.05	
10/27/97	Channel	15+000	<2.00	<2.00	<0.03	<0.03	<0.02	<0.02	<0.10	<0.10	<0.04	<0.04	<0.02	<0.02	<0.05	< 0.05	
10/27/97	Channel	20+000	<2.00	<2.00	<0.03	<0.03	<0.02	<0.02	<0.10	<0.10	<0.04	<0.04	<0.02	<0.02	< 0.05	<0.05	
10/27/97	Channel	25+000	<2.00	<2.00	<0.03	<0.03	<0.02	<0.02	<0.10	<0.10	<0.04	<0.04	<0.02	<0.02	< 0.05	<0.05	
10/27/97	Channel	30+000	<2.00	<2.00	<0.03	<0.03	<0.02	<0.02	<0.10	<0.10	<0.04	<0.04	<0.02	<0.02	< 0.05	<0.05	
10/27/97	Channel	35+000	<2.00	<2.00	<0.03	<0.03	<0.02	<0.02	<0.10	<0.10	<0.04	<0.04	<0.02	<0.02	<0.05	<0.05	
10/27/97	Channel	35+000	<2.00	<2.00	<0.03	<0.03	<0.02	<0.02	<0.10	<0.10	<0.04	<0.04	<0.02	<0.02	< 0.05	<0.05	
10/27/97	Channel	35+000	<2.00	<2.00	<0.03	<0.03	<0.02	<0.02	<0.10	<0.10	<0.04	<0.04	<0.02	<0.02	< 0.05	<0.05	
10/27/97	Channel	40+000	<2.00	<2.00	<0.03	<0.03	<0.02	<0.02	<0.10	<0.10	<0.04	<0.04	<0.02	<0.02	< 0.05	<0.05	
10/27/97	Channel	45+000	<2.00	<2.00	<0.03	<0.03	<0.02	<0.02	<0.10	<0.10	<0.04	<0.04	<0.02	<0.02	< 0.05	<0.05	
10/27/97		50+000	<2.00	<2.00	<0.03	<0.03	<0.02	<0.02	<0.10	<0.10	<0.04	<0.04	<0.02	<0.02	<0.05	<0.05	
10/27/97	Channel	55+000	<2.00	<2.00	<0.03	<0.03	<0.02	<0.02	<0.10	<0.10	<0.04	<0.04	<0.02	<0.02	< 0.05	<0.05	
10/27/97		55+000	<2.00	<2.00	<0.03	<0.03	<0.02	<0.02	<0.10	<0.10	<0.04	<0.04	<0.02	<0.02	<0.05	< 0.05	
10/27/97	Channel	55+000	<2.00	<2.00	<0.03	<0.03	<0.02	<0.02	<0.10	<0.10	<0.04	<0.04	<0.02	<0.02	< 0.05	<0.05	
10/27/97	Channel	60+000	<2.00	<2.00	<0.03	<0.03	<0.02	<0.02	<0.10	<0.10	<0.04	<0.04	<0.02	<0.02	<0.05	<0.05	
10/27/97	Channel	65+000	<2.00	<2.00	<0.03	<0.03	<0.02	<0.02	<0.10	<0.10	<0.04	<0.04	<0.02	<0.02	< 0.05	<0.05	
10/27/97	Channel	70+000	<2.00	<2.00	<0.03	<0.03	<0.02	<0.02	<0.10	<0.10	<0.04	<0.04	<0.02	<0.02	<0.05	<0.05	
10/27/97	Channel	75+000	<2.00	<2.00	<0.03	<0.03	<0.02	<0.02	<0.10	<0.10	<0.04	<0.04	<0.02	<0.02	<0.05	<0.05	
08/31/99	Channel	0+000	<2.00	<2.00	<0.04	<0.04	<0.02	<0.02	<0.10	<0.10	<0.06	<0.06	<0.03	<0.03	< 0.05	<0.05	
08/31/99	Channel	<u>5+000</u>	<u><2.00</u>	<2.00	<0.04	<0.04	<0.02	<0.02	<0.10	<0.10	<0.06	<0.06	<0.03	< 0.03	<0.05	<0.05	
08/31/99	Channel	10+000	<2.00	<2.00	<0.04	<0.04	<0.02	<0.02	<0.10	<0.10	<0.06	<0.06	<0.03	<0.03	<0.05	<0.05	
08/31/99	Channel	15+000	<2.00	<2.00	<0.04	<0.04	<0.02	<0.02	<0.10	<0.10	<0.06	<0.06	<0.03	< 0.03	<0.05	<0.05	
08/31/99	Channel	20+000	<2.00	<2.00	<0.04	<0.04	<0.02	<0.02	<0.10	<0.10	<0.06	<0.06	<0.03	< 0.03	<0.05	<0.05	
08/31/99	Channel	25+000	<2.00	<2.00	<0.04	<0.04	<0.02	<0.02	<0.10	<0.10	<0.06	<0.06	<0.03	< 0.03	<0.05	<0.05	
08/31/99	Channel	30+000	<2.00	<2.00	<0.04	<0.04	<0.02	<0.02	<0.10	<0.10	<0.06	<0.06	<0.03	<0.03	<0.05	<0.05	
08/31/99	Channel	<u>35+000</u>	<u><2.00</u>	<2.00	<0.04	<0.04	<0.02	<0.02	<0.10	<0.10	<0.06	<0.06	<0.03	< 0.03	<0.05	<0.05	
08/31/99	Channel	35+000	<u><2.00</u>	<2.00	<0.04	<0.04	<0.02	<0.02	<0.10		<0.06	<0.06	<0.03	<0.03	<0.05	<0.05	
08/31/99	Channel	40+000	<2.00	<2.00	<0.04	<0.04	<0.02	<0.02	<0.10	<0.10	<0.06	<0.06	<0.03	<0.03	<0.05	<0.05	
08/31/99	Channel	45+000	<2.00	<2.00	<0.04	<0.04	<0.02	<0.02	<0.10	<0.10	<0.06	<0.06	<0.03	< 0.03	<0.05	<0.05	
08/31/99	Channel	50+000	<2.00	<2.00	<0.04	<0.04	<0.02	<0.02	<0.10	<0.10	<0.06	<0.06	<0.03	<0.03	<0.05	<0.05	
08/31/99		55+000	<2.00	<2.00	<0.04	<0.04	<0.02	<u><0.02</u>	<0.10		<0.06	<0.06	<0.03	<0.03	<0.05	<0.05	
08/31/99	Channel	60+000	<2.00	<2.00	<0.04	<0.04	<0.02	<0.02	<0.10	<u><0.10</u>	<0.06	<0.06	<0.03	<0.03	<0.05	<0.05	
08/31/99	Channel	60+000	<2.00	<2.00	<0.04	<0.04	<0.02	<0.02	<0.10		<0.06	<0.06	<0.03	<0.03	<0.05	<0.05	
08/31/99		60+000	<2.00	<2.00	<u><0.04</u>	<0.04	<0.02	<0.02	<u><0.10</u>	<0.10	<0.06	<0.06	<0.03	<0.03	<0.05	<0.05	
08/31/99	Channel	65+000	<2.00	<2.00	<0.04	<0.04	<0.02	<0.02	<0.10	<0.10	<0.06	<0.06	<0.03	<0.03	<0.05	<0.05	
08/31/99		70+000	<2.00	<2.00	<0.04	<0.04	<0.02	<0.02	<0.10	<0.10	<0.06	<0.06	< 0.03	<0.03	< 0.05	<0.0	
08/31/99	Channel	75+000	<2.00	<2.00	<0.04	<0.04	<0.02	<0.02	<0.10	<0.10	<0.06	<0.06	<0.03	<0.03	<0.05	<0.0	

Table D-3b (Concluded)
USACE Water and Elutriate Concentrations (µg/L) for HSC Red Fish Reef to Morgan's Point, 1997-1999

Date	Reach	Station	TotPet	rolHC	TotPh	enols	TotSu	lfides	Amm	onia
			Water	Elutriate	Water	Elutriate	Water	Elutriate	Water	Elutriate
	Mai	rine Acute Criteria				[1	
03/06/97	7 Channel	25+000	10300	<100	<50.0	<50.0	<0.10	<0.10	0.28	<0.03
03/06/97	7 Channel	30+000	10300	<100	<50.0	<50.0	<0.10	<0.10	0.28	<0.03
10/27/9	7 Channel	0+000					-			
10/27/9	7 Channel	5+000								
10/27/9	7 Channel	10+000								
10/27/97	7 Channel	15+000				1				
10/27/97	7 Channel	20+000				Ī		l		NAME AND DESCRIPTION OF PARTY
10/27/9	7 Channel	25+000								
10/27/97	7 Channel	30+000								
10/27/97	7 Channel	35+000			-					
10/27/9	7 Channel	35+000								
10/27/97	7 Channel	35+000								
10/27/9	7 Channel	40+000								
10/27/9	7 Channel	45+000								
10/27/97	7 Channel	50+000						Î		
10/27/97	7 Channel	55+000								
10/27/97	7 Channel	55+000								
10/27/97	7 Channel	55+000								
10/27/9	7 Channel	60+000								
10/27/9	7 Channel	65+000								
10/27/97	7 Channel	70+000								
10/27/97	7 Channel	75+000								
08/31/99	Channel	0+000								
08/31/99	Channel	5+000								
08/31/99	Channel	10+000								
08/31/99	Channel	15+000								
08/31/99	2 Channel	20+000								
08/31/99	Channel	25+000								
08/31/99	9 Channel	30+000								
08/31/99	Channel	35+000								
08/31/99	Channel	35+000								
08/31/99	Channel	40+000								
08/31/99	Channel	45+000								
08/31/99	Channel	50+000								
08/31/99	9 Channel	55+000								
08/31/99	Channel	60+000								
08/31/99	Channel	60+000								
08/31/99	9 Channel	60+000								
08/31/99	Channel	65+000						1		
08/31/99	9 Channel	70+000								
08/31/99	Channel	75+000								***************************************

BDL: Below detection limit.

Table D-4
Chemical Analysis of Sediment Cores in Proposed Berthing Areas

Parameter					FS-25			FS-26	
Parameter				Sample 1		Sample 3	Sample 1		Sample 3
TOC	Parameter	Units							
% Solids % 0.1 74.3 76.4 78.9 74.0 78.2 81.2 Metais Arsenic mg/kg 0.10 2.6 11.1 4.7 3.7 5.8 7.5 Barium mg/kg 0.10 2.69 34.8 2.9.2 2.62 155 98.9 Cadmium mg/kg 0.10 ND 0.3 ND ND ND ND Chromium mg/kg 0.10 19.8 14.8 14.9 6.7 11.3 12.2 Copper mg/kg 0.10 5.3 3.9 5.0 4.7 7.5 11.8 Lead mg/kg 0.10 6.7 12.3 14.3 6.8 12.4 14.8 Mercury mg/kg 0.10 6.7 12.3 14.3 6.8 12.4 14.9 Selenium mg/kg 0.10 ND ND ND ND ND ND ND ND ND	TOC	mg/kg		4998	4332	4438	4691	2167	1589
Metals Arsenic mg/kg 0.10 2.6 11.1.1 4.7 3.7 5.8 7.7.			0.1	74.3					81.2
Barium	Metals		J		<u></u>				
Cadmium mg/kg 0.10 ND 0.3 ND ND ND Chromium mg/kg 0.10 19.8 14.8 14.9 6.7 11.3 12.0 Copper mg/kg 0.10 5.3 3.9 5.0 4.7 7.5 11.1 Lead mg/kg 0.10 7.4 3.1 7.5 0.3 0.5 13.3 Mercury mg/kg 0.02 0.053 0.046 0.050 0.026 0.023 0.044 Nickel mg/kg 0.20 ND	Arsenic	mg/kg	0.10	2.6	11.1	4.7	3.7	5.8	7.5
Chromium mg/kg 0.10 19.8 14.8 14.9 6.7 11.3 12.0 Copper mg/kg 0.10 5.3 3.9 5.0 4.7 7.5 11.1 Lead mg/kg 0.10 7.4 3.1 7.5 0.3 0.5 13.2 Mercury mg/kg 0.02 0.053 0.046 0.050 0.026 0.023 0.046 Nickel mg/kg 0.10 6.7 12.3 14.3 6.8 12.4 14.5 Selenium mg/kg 0.10 ND "><td>Barium</td><td>mg/kg</td><td>0.10</td><td>26.9</td><td>34.8</td><td>29.2</td><td>26.2</td><td>155</td><td>98.9</td></t<>	Barium	mg/kg	0.10	26.9	34.8	29.2	26.2	155	98.9
Copper mg/kg 0.10 5.3 3.9 5.0 4.7 7.5 11.8 Lead mg/kg 0.10 7.4 3.1 7.5 0.3 0.5 13.3 Mickel mg/kg 0.02 0.053 0.046 0.050 0.026 0.023 0.046 Nickel mg/kg 0.10 6.7 12.3 14.3 6.8 12.4 14.8 Selenium mg/kg 0.10 ND	Cadmium	mg/kg	0.10	ND	0.3	ND	ND	ND	ND
Lead	Chromium	mg/kg	0.10	19.8	14.8	14.9	6.7	11.3	12.0
Mercury mg/kg 0.02 0.053 0.046 0.050 0.026 0.023 0.046 Nickel mg/kg 0.10 6.7 12.3 14.3 6.8 12.4 14.5 Selenium mg/kg 0.20 ND ND ND ND ND ND Silver mg/kg 0.10 ND ND ND ND ND ND Silver mg/kg 0.10 ND ND ND ND ND ND Silver mg/kg 0.10 ND ND ND ND ND ND ND Silver mg/kg 0.10 ND ND ND ND ND ND ND Silver mg/kg 0.10 ND ND ND ND ND ND ND Silver mg/kg 0.10 ND ND ND ND ND ND ND Silver mg/kg 0.10 ND ND ND ND ND ND ND N	Copper	mg/kg	0.10		3.9	5.0	4.7	7.5	11.8
Nickel mg/kg 0.10 6.7 12.3 14.3 6.8 12.4 14.5 Selenium mg/kg 0.20 ND ND ND ND ND ND ND N	Lead	mg/kg	0.10	7.4	3.1	7.5	0.3	0.5	13.2
Selenium		mg/kg	0.02		0.046	0.050	0.026	0.023	0.040
Silver mg/kg 0.10 ND		mg/kg	0.10		12.3	14.3	6.8	12.4	14.9
Zinc		mg/kg	0.20		ND	ND	ND	ND	ND
PCB PCC PCC		mg/kg	0.10	ND	ND	ND	ND	ND	ND
PCB1016		mg/kg	0.10	31.9	48.2	58.7	30.4	36.4	47.6
PCB1221 µg/kg 1.0 ND		,							
PCB1242 µg/kg 1.0 ND									ND
PCB1248									ND
PCB1254 µg/kg 1.0 ND									ND
PCB1260									ND
PCB1232									
PCB-Total µg/kg 1.0 ND									
Pesticides									
Aldrin μg/kg 10 ND ND ND ND ND ND Chlordane μg/kg 10 ND > <td>μg/kg</td> <td>1.0</td> <td>ND</td> <td>ND</td> <td>ND</td> <td>ND</td> <td>ND</td> <td>ND</td>		μg/kg	1.0	ND	ND	ND	ND	ND	ND
Chlordane μg/kg 10 ND									
Dieldrin									
4,4 DDT μg/kg 10 ND									
Endrin μg/kg 5 ND									
Endosulfan I μg/kg 10 ND									
Neptachlor									
Lindane μg/kg 10 ND									
Toxaphene μg/kg 50 ND									
Total PAH Naphthalene μg/kg 20 ND									
Naphthalene μg/kg 20 ND ND ND ND ND ND Acenaphthene μg/kg 20 ND "><td></td><td>µд/кд</td><td>50</td><td><u> </u> [טא</td><td>וטא</td><td>[טא</td><td>[מא</td><td>ומא</td><td>UN</td></t<>		µд/кд	50	<u> </u> [טא	וטא	[טא	[מא	ומא	UN
Acenaphthene μg/kg 20 ND		l ug/kg	20	ND	NDI	ND	ND	ND	ND
Phenanthrene μg/kg 20 ND ND ND ND ND ND Fluoranthene μg/kg 20 ND <									
Fluoranthene μg/kg 20 ND ND ND ND ND ND Chrysene μg/kg 20 ND N									
Chrysene μg/kg 20 ND ND ND ND ND Benzo (A) Anthracene μg/kg 20 ND ND ND ND ND ND ND Benzo (A) Pyrene μg/kg 20 ND ND ND ND ND ND ND									
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$									
Benzo (A) Pyrene μg/kg 20 ND ND ND ND ND ND							***************************************		
	<u> </u>								
ווא ונוא ונאי ונאי ונאי ונאי ונאי ונאי ו	Total PAH	mg/kg	0.50	ND	ND	ND	ND	ND ND	ND.

440622/020135 D-1

APPENDIX E LAND USE/SOCIOECONOMIC SUPPORT DATA

							J					_,,,,,		. ,														
Park Name	Park Address	Total Acres	Developed Acres	Undevel. Acres	sites	Group Campsites	/e Camp /	Group Shelters/Pavilions	Playgrounds Golf Courses	Multiuse Courts	all Courts	DoublesTennis Courts	Muliuse Fields Softball Fields	Football Fields	Soccer Fields	Pools	Yds of Bank Fishing		ĕ∣		Alcilological Site Historic Site	Natatorium	Rodeo Arena	Marina	BBQ Grills Concession Stand		Stream Access	Lake/Bay Access
- GIN HAIRO	i dik Addiess				\perp	\perp		_ '	_ _		'	_ '	_ 0,					''	_	_ `	`			_			- Ollowill Access	Land/Day Access
DAYTOWA!																												
BAYTOWN BOWIE PARK	BOWIE SCHOOL, CLAYTON DR.	0	0	0			0		2 0	2	0	2		0 0		0	0	0	0 YI									
		9	9	0			0	0	2 0	2	0	2	2	0 0	0	0	0										COOCE CREEK	
ADAM'S FISHING PIER	MARKET ST.	0	0	0	0 (0	0	0	0 0	0	0	0	0	0 0	0	0	0		1 NO								GOOSE CREEK	
ALLENBROOK	4111 ALLENBROOK DR.	3	0	3	0 (0	0	0	0 0	1 -1	0	0	0	0 0	0	0	0		0 N									
ANSON-JONES SCHOOL PARK	STIMSON ST.	11	11	0	0 0	0	0	0	1 0	_	0	0	1	0 0	0	0	0		0 YI									
BARKULOO PARK	W. EL RANCHO DR.	6	5	1	0 0	0	0	0	1 0	1	0	0	1	0 0	0	0	0	1	0 YI					Х				
BAYLAND PARK	HWY. 146 AT GOOSE CRK.	31	10	21	0 (0	0	0	0 0	0	0	0	0	0 0	0	0	400	0	0 YI	ES				Х				GALVESTON BAY
BAYTOWN MARINA	1512 1/2 JOHN'S RD.	18	18	0	0 (0	0	0	0 0	0	0	0	0	0 0	0	0	0	4	2 N	0					Х	Х	CEDAR BAYOU	
BAYTOWN SENIOR SOFTBALL COMPLEX	HEMLOCK DR. AT CRAIGMONT BLVD.	6	6	0	0 0	0	0	0	0 0	0	0	0	0	0 0	0	0	0	0	0 YI	ES					Х	Х		
BAYTOWN SOCCER PARK	VILLAGE LN.	18	10	8	0 0	0	0	0	0 0	o	0	0	0	0 0	5	0	0	0	0 YI	ES					Х	Х		
BICENTENNIAL PARK	LEE DR. + MARKET ST.	11	6	5	0 0	0	0	0	0 0	0	0	0	0	0 0	0	0	0		0 N								GOOSE CREEK	
BRIARWOOD PARK	BRIARWOOD ST. + PARKWAY DR.	1	1	0	0 0	0	0	0	1 0	1	0	0	0	0 0	0	0	0		0 YI									
BUSCH TERRACE	AVE. K	2	2	0			0	0	2 0	1	0	0	0	0 0	0	0	0	0	0 N					×				
CARVER JONES PARK	CARVER JONES SCHOOL, WILLOW ST.	2	2	0			0	0	1 0		0	0	0	0 0	0	0	0		0 N					Ŷ				
CEDAR BAYOU PARKSITE	FM 1942 AT CEDAR BAYOU	154	2	151			0	0	0 0		0	0	0	0 0	0	0	0		0 N			V		^				
		154	0	154			0	4	1 0	0	0	0	1	0 0	0	0	0					^						
CENTRAL HEIGHTS PARK	ATLANTIC ST.	2	2	0			0	1	1 0	4	0	0	1	0 0	0	0	0		0 YI					^				
DALE ST. PARK	DALE + SHERIDAN STS.	0	0	0	0 (0	0	0	1 0	1	1	0	0	0 0	0	0	0		0 N									
DUKE HILL PARK	BARRYMORE + W. MAIN STS.	15	8	7	0 0		0	0	1 0	1	0	2	1	0 0	0	0	0		0 YI							Х		
EAST LITTLE LEAGUE PARK	10TH ST.	11	11	0	0 0	0	0	0	0 0	_	0	0	1	0 0	0	0	0		0 YI						Х	X		
EDDIE HURON PARK	BUSCH RD.	5	0	5	0 0	0	0	0	0 0	1 - 1	0	0	0	0 0	0	0	0		0 N									
F.D. MURDOCK PARK	DANUBINA ST.	1	1	0	0 0	0	0	0	1 0	0	0	0	0	0 0	0	0	0	0	0 N	0								
GOOSE CREEK PARK	W. TEXAS AVE. AT GOOSE CRK.	4	4	0	0 0	0	0	0	0 0	0	0	0	0	0 0	1	0	100	0	0 YI	ES							GOOSE CREEK	
GRAY SPORTS COMPLEX	EAST RD.	60	30	30	0 (0	0	1	1 0	1	0	4	7	0 0	0	1	0	0	0 YI	ES				Х	Х	Х		
JENKINS HOLLAWAY PARK	CROSBY ST. + CEDAR BAYOU RD.	70	35	35	0 (0	0	1	3 0	2	0	4	1	0 0	0	0	0	0	0 YI	ES		Χ		Х	Х	Х	CARYS BAYOU	
LEAGUE OF WOMEN VOTERS PARK	N. COLUMBIA ST.	16	5	11	0 0	0	0	1	1 0	1	0	2	0	0 0	0	0	0	0	0 YI	ES				Х			E. FORK GOOSE CR.	
MCELROY PARK	CRAIGMONT BLVD. + BAKER RD.	3	3	0	0 0	0	0	2	1 0	o	1	0	1	0 0	0	1	0	0	0 YI	ES				Х				
NEWCASTLE PARK	N. NEWCASTLE ST.	3	3	0	0 0	0	0	1	1 0	1 - 1	1	0	1	0 0	0	0	0		0 N									
NORTH LITTLE LEAGUE PARK	LYNCHBURG + CEDAR BAYOU RD.	6	6	0			0	0	0 0	_	'n	0	0	0 0	0	0	0		0 YI						Х	x		
N.C. FOOTE PARK	W. MAIN ST. BY CIVIC CTR.	0	0	0			0	0	1 0		1	0	1	0 0	0	1	0		0 YI					X		Ŷ		
PELLY PARK	S. MAIN ST.	6	6	0			0	1	1 0	_	0	0	0	0 0	0	0	0		0 YI					x		x		
REPUBLIC OF TEXAS PLAZA		0	0	0			0	0	-		0	0	0	0 0	0	0	0		0 YI					^	^	^		
ROSELAND PARK	N. MAIN ST. E. TEXAS AVE. + ROSELAND DR.	22	22			0 0		0 5	0 0		0	0	0	0 0	4	4	0	0	1 Y					x		х	CEDAR BAYOU	
		22		۷			U	0	-1 -		0	V	4	0 0		1	0							/`		^	CEDAK BATOU	
RUFUS BERGERON PARK	KENTUCKY + GEORGIA STS.	2	2	U			U	0	1 0	0	0	U	1	0	0	U	0		0 YI					Х				
SHEPPARD PARK	DECKER DR. + W. TEXAS AVE.	2	0	2		ار ار	U	U	0 0	U	U	U	U	0	0	U	0		0 YI		1							
TRAVIS SCHOOL PARK	BAYWAY DR.	5	5	0			U	0	1 0	2	0	2	0	0	0	U	0		0 YI					X	.,	.,		
UNIDAD PARK	AIRHART + LYNCHBURG RD.	16	10	6		0	0	4	2 0	0	1	U		0	0	0	0		0 YI						Х	Х		
WALKER PARK	RIVER BEND DR.	2	2	0	0 (0	0	0	1 0	0	U	U	1	0	0	0	0	1	0 YI					X				
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Source: TPWD, 1987.

NA - Not available from source document; totals will not add.



Texas City Vision 2020

A Report to the Mayor and City Commission, The City of Texas City, Texas

Prepared For
The Vision 2020 Committee

The School of Urban and Public Affairs
The University of Texas at Arlington
Box 19588, Arlington, TX 76019-0588
June 1998

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Purpose Statement

Vision 2020 is a culmination of thoughts and concerns by focus groups and committee members to develop a plan of action which will continue the organized direction created by Goals 2000 and will guide our community into the Twenty-first Century.

Vision Statement

A city of the future in which a prosperous, diverse economic base is strengthened by a commitment to serve as an international leader in emerging technologies with opportunities for all economic and social levels in an inclusive environment that balances broad interaction among all races, ethnicities, and cultures. A leader in industry, business, and finance located with immediate access to major land and air transportation arteries, while maintaining a small town atmosphere and convenience with varied cultural and recreational opportunities emphasizing the arts, dining and entertainment.

TEXAS CITY--A city with an All American heritage and an All World future as a leader in:

- Technology
- Recreational/Sporting Development
- Family Oriented Values and Activities
- Educational Excellence
- Environmental and Ecological Advances
- Entertainment: The Arts, Shopping, and Dining
- Aesthetically pleasing business and residential facilities
- Workforce Education and Training
- Developing and Supporting a Diverse Economy

The Vision 2020 Process

The Vision 2020 process employed three forms of public discussion to assure both a broad outreach and full deliberation of options and ideas. The three forms were

- 1. **Interviews** -- approximately 50 key persons. Leaders from various sectors ranging from neighborhoods to business organizations, from schools to chambers of commerce. Each leader was extensively interviewed one-on-one by individual consultants.
- 2. **Focus groups** -- twelve volunteers were trained to be facilitators and/or recorders for focus groups. Then twelve focus groups, involving different types of people, gathered in different areas of the city. In the focus groups the facilitators introduced ideas but didn't try to lead the discussions. This input reflects what ideas engage people in deeper, more reflective conversations. The results were extremely useful in evaluating ideas expressed in the interviews and in structuring the terminology of concepts in "the citizen's language." Approximately 150 people were engaged extensively in this phase of the process.
- 3. **Strategic deliberation** by a diverse corps of approximately 20 community leaders to work through the ideas generated from the other forms of input and decide upon priorities and assignments for action

The initial interviews produced a summary of ideas shaped around strengths, weaknesses, opportunities, barriers to opportunities, threats and the most urgent priorities. These interview results were presented to the steering committee for reaction, and then structured into concepts that could be tested in the focus groups.

The next step was the selection of focus group volunteers. The volunteers were chosen as a diverse group of persons who could hold their own emotions in check while they encouraged others to talk. The focus group leaders were trained in a half-day long session by the consultants.

Community discussions were organized as focus groups. The groups were recruited from different segments of the population, and scheduled over the summer and early fall. Volunteers wrote extensive reports of the focus group discussions which were analyzed and summarized by the consultants. The consultants then presented the findings from the focus groups at an all day retreat of the steering committee.

The first all-day retreat produced the elements of a vision statement and the basic alternatives that might become the goals -- organized by such subject areas as 'economic development and tourism'. The results of the first retreat were then taken to a second all-day retreat where the specific content for the vision statement was agreed to, the goals agreed to and prioritized and action steps identified for each of the highest priority goals.

The final step of the process is a draft report which is to be reviewed by the steering committee for any final changes.

The process was extensive and should produce a high quality set of action plans. However, like any good planning product, it will need periodic reviews to determine what changes, if any, are needed. It also needs to be followed by an extensive effort to make sure progress is appropriately celebrated. Texas City did that with its Goals 2000 initiative, and became a national model with its All-America City Award in 1997.

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Early Action Steps

Economic Development and Tourism

Under this general category, 3 goals were chosen as immediate priorities. These were:

- A. An economy which is sufficiently diverse so that a downturn in any one area does not materially affect the economy as a whole
- B. An economy that attracts residents and higher income/skilled people
- C. Contaminated sites have been turned into productive properties

Goal A, an economy which is sufficiently diverse so that a downturn in any one area does not materially affect the economy as a whole -- was assigned four key objectives:

- (A-1) Current businesses have stayed and prospered
- (A-2) An aggressive recruitment team is in operation with assistance from people with a good track record
- (A-3) Assets are inventoried for diversification
- (A-4) Wetlands have been identified, classified, and appropriately protected and utilized

The highest priority objective was (A-1), <u>Current Businesses have stayed and prospered</u>. Responsibility for this objective was assigned to the Economic Development Corporation to work in collaboration with local government bodies, contractors and other key players. There were three early action steps identified.

- Action Step 1 Develop good lines of communication with upper management of existing plants timeline 6 months
- Action Step 2 Bring together an assemblage of plant managers and union representatives to be a proactive force to keep plant operations in Texas City timeline 12 months
- Action Step 3 Develop a support system for local service contractors timeline 6 months

The second high priority objective was (A-2), <u>Aggressive Recruitment Team in Operation</u>. This objective was also assigned to the Economic Development Corporation -- to work on it with area Chambers of Commerce. There were three early action steps identified for this objective:

- Action Step 1 Search out "talents and knowledge" to appoint to specific industry teams 60 days
- Action Step 2 Develop a Youth Commission Campus Facility recruitment team by November 15, 1997
- Action Step 3 Develop specific industry teams 6 months

The third objective in the Diversified Economy goal was <u>Assets Inventoried for Diversification</u>. This objective is already being addressed by the Economic Development Corporation in a strategic

planning process that used a matrix analysis of available workforce and industry gaps. The latter process called "crosshairs targeting" has been completed and the results were synthesized with the other goals, objectives and action steps. That report is attached to this report as the Economic Development Strategic Plan (page 43).

The final objective for priority action was (A-4), <u>Wetlands Identified and Classified and Appropriately Protected and Utilized</u>. This objective was assigned to the City Planning Commission and Plan Department staff. There were three immediate action steps recommended:

- Action Step 1 Bring the Corps of Engineers into tighter collaboration on the City's Land Use Plan timeline 12 months
- Action Step 2 Develop clarity on assured wetlands in the Land Use Plan timeline 18 months
- Action Step 3 Develop a user friendly system for clarifying the status of wetlands "in doubt" and proceeding through a mitigation process timeline 2 years

Goal B, An economy that attracts residents and highly skilled individuals and results in higher incomes for all, was assigned three key objectives:

- (B-1) Housing options near one's work for all levels
- (B-2) Telcommuting Centers developed
- (B-3) Amenities and Arts developed

The highest priority objective was (B-1) <u>Housing options near one's work</u> - <u>for all levels</u>. Responsibility for this objective was assigned jointly to the Texas City Housing Finance Agency, the Texas City Housing Planning Board, the Community Development Board and the City Commission -- working with appropriate developers and realtors. There were two early action steps recommended:

Action Step 1 - Form a proactive housing development entity - timeline 6 months Action Step 2 - Form a positive plan for varied housing development - timeline 12 months

The second priority objective was (B-2), <u>Telecommuting Centers Developed</u>. Responsibility was assigned to the Texas City Independent School District, the LaMarque Independent School District and the College of the Mainland (subject to their concurrence). There was one immediate action step suggested:

Action Step 1 - Organize a coalition involving the school districts, College of the Mainland, business leaders and community leaders - timeline 6 months

The final priority objective was (B-3) <u>Amenities and Arts Development</u>. This was assigned to the TCISD, LMISD, and College of the Mainland trustees (subject to their concurrence). Two early action steps were recommended.

Action Step 1 - Organize a working group of school districts, College of the Mainland and community leaders to support arts education and development

Action Step 2 - Do a "benchmark" review of Highland Park.

The final early priority goal for Economic Development and Tourism was (C), Contaminated sites have been turned into productive properties. There was one key early objective detailed for this goal: (C-1) Reuse feasibility of Superfund sites determined. This was assigned to Clean Starts, Texas City. It was given three immediate action steps:

- Action Step 1 Make Tex-Tin a viable industrial Brownfield property. This site is currently in Court. A plan is expected during 1998, site cleanup work is expected to start in 12 months, and it should be ready for development by 2001.
- Action Step 2 Make Malone a viable industrial Brownfield property. This should take one year for determination of cleanup responsibility and reuse.
- Action Step 3 Make Motco a landscape area. Work will begin on this effort in the Spring of 1998. This will require working with the Texas Development of Transportation.

Education

There were four goals established for the education area. Of these, the initial priority was given to Goal A, A Universally Recognized Top Quality Educational System. For this goal, eleven objectives were recommended, but not prioritized:

- (A-1) Students and faculty have access to the latest learning technologies
- (A-2) Involvement of the community in monitoring education quality
- (A-3) Clerical support for teachers
- (A-4) More local community contributions of time and money
- (A-5) Professional development requirements for teachers
- (A-6) Health maintenance education for all ages, including practical health maintenance skills (such as CPR, etc.)
- (A-7) All educational facilities located on open, accessible, barrier-free campuses
- (A-8) Broad, community cultural education (including local history, arts, etc.)
- (A-9) Highest quality, inclusive special education programs (for physically and mentally challenges students)
- (A-10) Optimal utilization of all educational facilities (all year, all week, all day); planned construction of multi-use facilities
- (A-11) True life-learning for all ages from the very young to the very old. (Manners, deportment, social skills)

It was agreed that this entire section needed to become the focus of a greater Texas City - La Marque quality education committee which would be composed of citizens, school district officials and the College of the Mainland key executives. The responsibility for initiating this action was assigned to the Mayor's Office for completion as soon as possible.

Quality of Life

Under this category, two goals were chosen as immediate priorities:

- A. Change environmental quality perception, and
- B. Neighborhoods that are conducive to safe, healthy family living

Goal A, Change environmental quality perception -- was assigned three key objectives:

- (A-1) Ecological management of sensitive areas
- (A-2) Emphasizing positive aspects of Texas City
- (A-3) Texas City Environmental Watch/Reporting System
- Highest priority was given to (A-1) Ecological management of sensitive areas. Two early action steps were identified:
 - Action Step 1 inventory and identify environmentally sensitive areas. Responsibility for this step was assigned to the Transportation and Planning Department timeline 12 months.
 - Action Step 2 promote and provide incentives for protection and use of environmentally sensitive areas. Responsibility for this step was assigned to the Environmental Protection Committee timeline 18 months.
- Second priority was given to (A-2) Emphasizing positive aspects of Texas City. Two early action steps were identified:
 - Action Step 1 continue the education of the public on the "Benefits of Living in Texas City", with responsibility assigned to the City Commission timeline 6 months.
 - Action Step 2 record "Before /After" images of progress made, with responsibility also assigned to the City Commission timeline 12 months.
- Finally, third priority was given to (A-3) Texas City Environmental Watch/Reporting System (Emergency warning, protection and evacuation system). Four early action steps were identified:
 - Action Step 1 establish local (city) control of hurricane protection levee floodgate. City and county governing bodies would be responsible for this step timeline 12 months.
 - Action Step 2 upgrade siren system, with the Emergency Management Director responsible timeline 24 months.
 - Action Step 3 install electronic (multimedia) safety communication system, with the Emergency Management Director, would be responsible in cooperation with the police and fire chiefs timeline 48 months.
 - Action Step 4 evaluate and enhance local emergency evacuation system, with the Emergency Management Director, would be responsible in cooperation with the police and fire chiefs timeline 24 months.
- Goal B, Neighborhoods that are conducive to safe, healthy family living was assigned three key objectives:
 - (B-1) Encourage innovative ideas for general improvements to make Texas City safer, cleaner, and healthier
 - (B-2) Annual awards for achievement
 - (B-3) Rigid enforcement of housing and health codes

Highest priority was given to (B-1) Encourage innovative ideas for general improvements to make Texas City safer, cleaner, and healthier, which was combined with (B-2) Annual awards for achievement. Three early action steps were identified, with the Planning and Community Development responsible for the first two steps.

- Action Step 1 develop neighborhood improvement program timeline 24 months.
- Action Step 2 provide technical assistance in program formulation timeline 24 months.
- Action Step 3 provide monetary and other incentives, such as, awards, recognition, contest. The City Commission would be responsible for this step timeline 24 months.

Second priority was given to (B-3) Rigid enforcement of housing and health codes. Three early action steps were identified, with the Public works Department responsible for the first two steps.

- Action Step 1 incorporate, with assistance from other departments concerned, all complaints (nuisance, safety, health, etc.) and actions thereon into the city's Geographic Information System (GIS) timeline 24 months.
- Action Step 2 furnish periodic reports from GIS to the Common Nuisance Abatement Team (CNAT) timeline 24 months.
- Action Step 3 plan future activities, the responsibility of CNAT timeline 36 months.

Other Goal Categories

In addition to the three goals which had high priority objectives, there were three other goals:

- Safety
- Housing
- Transportation and Other Public Facilities and Services

Goals and Objectives

To help realize its vision for the future Texas City the Committee formulated and then prioritized some thirty goals¹. The nine top-ranked goals are listed in order of priority in the following table. The table also shows the topic or category in which goals were grouped and the number of votes each of the goals received.

Rank The	Top Nine Priority Goals	Topic [!]	V ²
I A univ	ersally recognized, top quality educational system	EDUC-A	33
	nomy which is sufficiently diverse so that a downturn in any one area does not materially affect the ny as a whole	EDAT-A	17
3 A chan	ged environmental quality perception	QOL -A	15
4 Neight	orhoods that are conducive to safe, healthy family living	QOL -B	14
5 An eco	nomy that attracts residents and highly skilled individuals and results in higher incomes for all	EDAT-B	13
6 Contar	ninated sites have been turned into productive properties	EDAT-C	12
7 A wate	rfront development - completed - supportive of tourism and marine industry	EDAT-D	8
8 Vocation	onal preparation for young people	EDUC-B	7
	uing community education for all ages that takes full advantage of the latest in video, high tech, distance ag, open university concepts, etc.,	EDUC-C	6

Topics shown include: EDUC (Education); EDAT (Economic Development And Tourism); and QOL (Quality Of Life). Each goal in a topic cateogry was assigned a different letter so that individual goals could be easily identified.

A complete list of the goals follows, along with the objectives² formulated by the Committee, grouped in six topical categories.

The figures in the column header "V" represent the number of "votes" each goal received.

A goal was understood to mean "A statement that defines an end-result."

An objective meant "A statement of a measurable amount of progress toward a goal."

ECONOMIC DEVELOPMENT AND TOURISM

- A. An economy which is sufficiently diverse so that a downturn in any one area does not materially affect the economy as a whole [17]³
 - 1. Current businesses have stayed and prospered [11]
 - 2. An aggressive recruitment team in operation with a good track record [19]
 - 3. Assets inventoried for diversification (crosshairs project) [14]
 - 4. Wetlands identified and classified and appropriately protected and utilized [13]
 - 5. Subsidence under control
 - 6. Healthcare industry with good doctors [6]
 - 7. "Boat" manufacturing industry [2]
 - 8. Aquaculture industry [1]
 - 9. Recycling industry [4]
- 10. Cultivation of environmentally-sensitive businesses

B. An economy that attracts residents and highly skilled individuals and results in higher incomes for all [13]

- 1. Housing options near one's work for all levels [16]
- 2. Telecommuting centers [12]
- 3. Amenities and arts [9]
- 4. Sufficient part-time jobs [5]
- 5. Strong service economy [7]
- 6. Mall economy solid
- 7. Strong regional retail center [3]

C. Contaminated sites have been turned into productive properties [12]

1. Reuse feasibility of superfund sites determined [20]

Tex-tin -- a viable industrial Brownfield property

Malone -- a viable industrial Brownfield property

Motco -- a landscape area

- 2. Contaminated sites that are not superfund sites are analyzed and reuse determined [14]
- 3. Significantly decreased contaminated acreage [13]

D. A waterfront development - completed - supportive of tourism and marine industry [8] (assigned to the Waterfront Development Commission and Trade Zone Corporation)

- 1. Marina north of dike in the Moses Lake area
- 2. Boardwalk with restaurants, shops, arts and crafts
- 3. Hotel

numbers in brackets, such as [17], indicate the points awarded by workshop participants to the goal or objective. Where no number is shown, participants had awarded no priority points to the particular goal or objective. In those cases where all objectives under a given goal are without numbers, participants chose not to consider assigning points because the goal itself was among the lower priority goals.

- 4. Coastal offices for Texas Parks and Wildlife, US Fish and Game, etc.
- 5. Hatcheries for key commercial marine life
- 6. A Sport-fishing industry [4]

E. Full Employment - anyone who wants a job has a job or is in training to move to something else [4] (assigned to a soon-to-be-created Workforce Development Board -- interim to the Education priorities)

- 1. Low cost entry level training [3]
- 2. Work connection centers [11]
- 3. Public transportation to work centers [7]
- 4. Work at home opportunity [3]
- 5. Continuous workforce training with extensive cross training [14]
- 6. Small business incubation and assistance centers [16]

F. Historic central business district with viable businesses [2]

- 1. Street of memories [4]
- 2. Restoration of economically feasible buildings [5]
- 3. Entertainment attractions (Showboat) [8]
- 4. Unusable structures, removed and replaced with economically viable uses, attractive buildings [20]
- 5. Connection to Heritage Square Davison House [2]
- 6. Farmers Market/Traders Day [9]
- 7. Texas City Mainland Museum enhanced and marketed [7]
- 8. Bike trail linkages [9]

G. A flexible infrastructure that supports fast changes in a broad range of industry needs [2]

- 1. Training investment tradition in all work places [12] (assigned to College of the Mainland)
- 2. Utilities sewers, water and power to all cluster centers [11]

H. Tourism assets have been identified, developed and marketed (assigned to the Parks, Recreation and Waterfront Development Commission and the Wildlife Commission)

- 1. Flourishing ecotourism; dike, birding trails, other nature trails [15]
- 2. Flourishing RV park [3]
- 3. Focus on family and snowbird tourism [5]
- 4. Dike developed [16]
- 5. Strong recreational boat launching, storage and maintenance industry [4]
- 6. Marina [7]
- 7. Waterfront development [10]

- I. A port trade developed to its maximum capacity and potential (assigned to the Waterfront Development Commission and the Trade Zone Corporation)
 - 1. Distribution (warehousing and storage) and intermodal shipping center [16]
 - 2. Offshore rig repairs
 - 3. Deeper channel [4]
 - 4. Barge manufacturing [2]
 - 5. A port potential inventory and asset protection system -- a regional port cluster [10]
 - 6. Texas MegaPort developed [12]
 - 7. A ferry port at waterfront park [7]

J. Other

- 1. Commercial Development around Mall -- eateries -- after hours business, satellite business
- 2. Two to three business/industry parks identified and developed
- 3. Networking with regional industries for effective business forecasting

EDUCATION

A. A universally recognized top quality educational system [33]⁴

- 1. Students and faculty have access to latest learning technologies
- 2. Involvement of community in monitoring education quality
- 3. Clerical support for teachers
- 4. More local community contributions of time and money
- 5. Professional development requirement for teachers
- 6. Health maintenance education for all ages, including practical health maintenance skills (such as CPR, etc.)
- 7. All educational facilities located on open, accessible, barrier-free campuses
- 8. Broad, community cultural education (including local history, arts, etc.)
- 9. Highest quality, inclusive special education programs (for physically and mentally challenged students)
- 10. Optimal utilization of all educational facilities (all year, all week, all day); planned construction of multi-use facilities
- 11. True life-learning for all ages from the very young to the very old. (Manners, deportment, social skills)

B. Vocational preparation for young people [7]

- 1. Skills specialty training in secondary and community college system
- 2. Development of two regional training networks

Objectives were recommended for each educational goal listed <u>but they were not prioritized</u> because this entire ssection is intended to be assigned to a special Education Committee for review and action.

C. Continuing community education for all ages that takes full advantage of the latest in video, high tech, etc., distance learning, and open university concepts. [6]

- 1. Create small business incubators
- 2. Partnership task forces to investigate possibilities
- 3. More effective use of local TV Access Channel
- 4. Web Page devoted to local educational enrichment
- 5. Parental participation/involvement with students in the classroom, such as computer literacy classes

D. Year-around vocational programs for youth [1]

- 1. Coordinated with vocational training (include <u>back office</u> employee skills)
- 2. Programs for sharing special skills by the talented with the less talented

E. Improved alternative education opportunities for "at-risk" students

- 1. Achieve a zero-drop out rate
- 2. Provide a peer mentoring program especially for teenagers
- 3. Make vacation time a reward for achievement
- 4. Provide "boot camp" for problem students
- 5. Use counseling, positive reinforcement, and rewards to encourage performance

SAFETY

A. "Community Partnerships" for preserving physically and environmentally safe living environments [4]

- 1. Emergency warning and protection and evacuation system [14]
- 2. Broad electronic safety communication system [6]
- 3. Safety-engineered public facilities, including transportation systems (such as streets, bikeways, sidewalks, public trails) [15]
- 4. Residences structures in compliance with applicable environmental standard, such as EPA, ADA, OSHA, etc. [7]
- 5. Small business structures in compliance with applicable environmental standard, such as EPA, ADA, OSHA, etc. [7]

B. State of the art fire/police services, including the best available training for emergency personnel

1. Zero repeat offenders in all age groups and crime categories

QUALITY OF LIFE

A. Change environmental quality perception [15]

- 1. Ecological management of sensitive areas [15]
- 2. Emphasizing positive aspects of Texas City [9]
- 3. Texas City Environmental Watch/Reporting System [7]

B. Neighborhoods that are conducive to safe, healthy family living [14]

- 1. Encourage innovative ideas for general improvement: safer, cleaner, healthier [11]
- 2. Annual awards for achievement [6]
- 3. Rigid enforcement of housing and health codes [10]

C. Adequate services and housing for an aging population [2]

1. Amenities and activities for senior citizens

D. Full range of superior parks, recreation and cultural services and facilities

1. Emphasis on cultural and historical programs

E. Greenbelt buffer zones established and made viable

- 1. Appropriate greenbelt "industries' identified and encourages -- like tree growing [20]
- 2. Bird habitat zones established and protected [14]
- 3. Appropriate recreational sites identified and developed [11]

F. Leadership development and citizen activation program for all ages, including team building

G. Accessible health care for all ages

- 1. Improved health care education
- 2. Improved delivery of health services

HOUSING

A. Develop Master-planned communities to attract a variety of residents [2]

- 1. Inventory of available land including wetlands [11]
- 2. Provide public incentives for upscale development [15]

- 3. Market and promote available housing with all family levels [10] (good schools, safe streets, secure investment, amenities, services)
- 4. Provide waterfront housing

B. Proper mix for compatible land uses, access connections, buffering and amenities in new and existing areas

- 1. Buffering requirements in all non-residential developments when property ownership changes [16]
- 2. Enforce buffering requirements as a condition of sale [3]

C. Convert traditional public housing into homeowner-type of neighborhood environment

- 1. Incentives to encourage home ownership, such as [16]
 - first-time home buyer program
 - senior citizen disability subsidy
- 2. Programs to inform and train citizens in public housing to be prepared for home ownership responsibility [7]
- 3. Seed money support for Habitat for Humanity Home Construction [12]

D. Maintain quality housing in established neighborhoods in various price ranges

- 1. Stringent building code enforcement [11]
- 2. Seek public funds (grants) for blight elimination [4]
- 3. Establish, mobilize, encourage strong neighborhood associations [11]
- 4. On-going program of city improvement to support neighborhood efforts [14]

TRANSPORTATION AND OTHER PUBLIC FACILITIES AND SERVICES

A. Enhanced movement of people to key public and private destinations [4]

- 1. Conveniently located transportation centers [16]
- 2. A light rail center with bus connections to area cities
- 3. A secure park and ride connection to the center [9]
- 4. Incentives to encourage optimal use of centers [5]
- 5. Private investment in center construction/operation [3]
- 6. Individual centers linked with communications [5]
- 7. On-site information about available services [2]
- 8. Transportation all modes available including the "helicopter" [5]

B. Cultural and educational systems that make the latest technology available to and encourage interaction of people of all ages, faiths, and backgrounds [4]

1. Continued enhancement of city library with latest in technology [16]

- 2. Improved community public access channel programming [4]
- 3. Expanded community use of the Internet for personal use in public and commercial places [9]

C. Community public infrastructure [2]

- 1. Improved drainage systems, particularly retention ponds [15]
- 2. Ongoing maintenance program for underground and surface water distribution systems to reduce water loss [9]
- 3. Reduced (or "zero") waste water system infiltration [9]
- 4. Non-potable water used for conservation purposes [7]
- 5. Increased surface water capacity (to fulfill future industrial and residential needs) [6]
- 6. Communication towers, cables, ROWs in place [7]

D. Enhanced intercity movement of people with multimodal uses including pedestrians, bicycling, and more conventional modes (i.e. cars, buses) [1]

- 1. Hike and bike trails [9]
- 2. Bicycle pickup/return system [4]
- 3. Safe designated bike routes [7]
- 4. A "connect system" (departure/return) for buses, vans, etc. to evolve into 2-route systems eventually [16]
- 5. Home delivery of consumer goods for shut-ins and others [5]

E. Efficient delivery of city services

- 1. Elimination of redundancy in service delivery [13]
- 2. Incentives to reduce waste and encourage increased recycling [7]
- 3. Trash control and frequency of removal [6]
- 4. Joint reading of utility meters
- 5. Eliminated overlapping of city/state districts
- 6. Up-to-date management methods [8]
- 7. More cost effective service through privatization and competition [13]
- 8. Regular performance audits on government programs [3]



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RESOLUTION NO. 2001-17 REAFFIRMING SEABROOK'S

OPPOSITION TO EXPANSION PLANS OF THE HOUSTON PORT AUTHORITY INTO AND WITHIN THE CITY OF SEABROOK

WHEREAS, Seabrook is a tranquil, seaside, residential community with a smalltown atmosphere; and

WHEREAS, the City of Seabrook has chosen not to pursue heavy industrial enterprises which may disturb the peace, tranquility, health, safety, and welfare enjoyed by its residents; and

WHEREAS, The Houston Port Authority plans an expansion of the Bayport complex, including a large scale railroad yard for loading and unloading containers and a four-lane parkway which may encourage heavy traffic through Seabrook; and

WHEREAS. the aforementioned rail yard will be located within the city limits of Seabrook in violation of the City's zoning ordinance; and

WHEREAS, the peace, tranquility, health, safety, and welfare of the citizens of Seabrook will be disturbed by noise, light, water and air pollution from the 24 hour per day operation of trains, cranes, trucks and other heavy equipment; and

WHEREAS, this expansion will have an extreme negative environmental impact on Seabrook and surrounding areas; and

WHEREAS, several hundred acres of land zoned light industrial will be removed from the tax rolls, forever thwarting the city's long range plans of economic development, thereby preventing expansion of the tax base needed to support the ever-growing population; and

WHEREAS, City of Seabrook Resolutions 98-23, 98-15 and 99-19 have previously expressed the City's opposition to the Bayport expansion; and

WHEREAS, the terrorist attacks of September 11, 2001 constitute further evidence that the location of large industrial complexes, such as the Port of Houston, near residential communities is dangerous and creates an unacceptable hazard to Seabrook citizens and citizens of surrounding communities; and

Res. No. 2001-17 Page 2

WHEREAS, the recent attacks and events in our country also prove that additional time is needed for citizens and cities to comment on the EIS when it is released to the public;

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NOW, THEREFORE, BE IT RESOLVED BY THE CITY OF SEABROOK, STATE OF TEXAS:

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THAT, the City Council of the City of Seabrook, by the individual signatures of each member hereon, does reaffirm unanimous opposition to the expansion plans of the Houston Port Authority which would locate any portion of the Port closer to the City of Seabrook and thus would present additional dangers to the health, safety, and welfare of our citizens; and, further,

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THAT, the City Council respectfully requests that the public be granted at least 180 days to comment following the release of the DEIS due to the recent terrorists' attacks and threats, the magnitude of this project and its effect on Seabrook and surrounding communities.

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AND IT IS SO ORDERED.

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ADOPTED THIS 16TH DAY OF OCTOBER 2001.

67 68 69

TACK C EDÁDAY

70 JACK C. 171 MAYOR

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MIKE LAIBLE

COUNCILOR, POSITION 1

HERMAN BURTON

MAYOR PRO TEM &

COUNCILOR, POSITION 6

DICK ROGA

COUNCILOR, POSITION 2

RICK SAMMONS

COUNCILOR, POSITION 3

BUDDY HAMMANN

COUNCILOR, POSITION 4

PETE BRACCIO

COUNCILOR, POSITION 5

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Nov. 26 2001 03:25PM P4

Res. No. 2001-17 Page 3

91 92 ATTEST:

93 94

95 Michile & Ellaser

97 Michele L. Glaser, TRMC

98 City Secretary

Community Vision

Chapter 2

One of the most important characteristics of the La Porte*Comprehensive Plan Update is that it serves as a statement of policy. The comprehensive plan is general in nature and is intended to provide a statement about the community goals and policies, the general distribution and location of land use and circulation, and other general guidelines for the various plan elements. The plan should provide an overall guide for future growth and development while allowing some flexibility in its interpretation and use to respond to new ideas and direction as the City progresses, changes and grows.

The La Porte Comprehensive Plan Update is organized and implemented using a hierarchy of guiding principles. The overall *Community Vision* is at the top of the hierarchy. A set of community goals follow with supportive objectives, policies and actions to form the implementation framework and provide direction for the future growth and development of the community. Each element of the plan has a vision statement that is specific to the element and consistent with the overall vision of the community. The definitions of the guiding principles are as follows:

A *Vision Statement* is a broad statement of how the community views itself as it moves into the 21st Century. A vision for the community is an ideal and unique image of the future based on the community values.

To have a vision means to look ahead: to imagine the future. Visioning is a process by which a community envisions its preferred future. A vision chronicles the hopes, dreams, and aspirations of a community and helps citizens agree on what they want their community to become.

Goals are the general ends toward which cities direct their efforts. A goal addresses issues by stating policy intention. They are both qualitative and quantifiable, but are not quantified. Goals stretch and challenge cities, but they are realistic and achievable.

Objectives are clear targets for specific action. They mark quantifiable interim steps toward achieving a City's long range mission and goals. Linked directly to goals, objectives are measurable, time-based statements of intent. They emphasize the results of City actions at the end of a specific time period.

Policies are statements of a definite course or method of action selected from among alternatives and in light of given conditions to guide and determine present and future decisions.

Actions are methods to achieve goals and objectives. Formulated from goals and objectives, an action is the means for transforming goals to outcomes, with the best use of resources. An action reflects budgetary and other resources.

A "visioning" process was conducted to develop community consensus on the goals and objectives that form the framework for the La Porte Comprehensive Plan Update. In order to create a shared vision of the future, the process involved city leaders and citizens in a dialogue to identify issues, determine the assets and challenges of the community, and prepare goals and objectives that will shape and define the future. The visioning process generally involved answering four questions, including:

Chapter 2

To be a community recognized for the quality of its built environment and the integration of the natural landscape and amenities such as Galveston Bay and Little Cedar Bayou.

To be a community that ensures a good balance between residential, commercial, industrial, and public/institutional uses supported by quality infrastructure and transportation systems and a sensitivity to the environmental influence of adjacent uses.

To be a community known for its innovative solutions to managing growth and responsiveness to the needs of citizens and businesses.

To be a community that offers business and industry a competitive economic environment and is aggressive in its effort to attract, retain and expand the local economy.

To be a community devoted to the **protection of its environment** and preservation and conservation of its natural and cultural resources.

To be a community that strives for economic balance and an equitable distribution of its financial resources in all areas of the community.

To be a community that is committed to its future through reinvestment in older neighborhoods and provision of adequate infrastructure.

STATEMENT OF GOALS

A clear and concise statement of goals for maintaining and improving La Porte's quality of life was developed as the foundation of the comprehensive plan. Focusing efforts on goals increases the plan's effectiveness in minimizing adverse effects of growth and change, seizing opportunities, and anticipating and alleviating potential problems. The identification of goals provides a basis for decision-making during both development and implementation of the plan. Goals also help to promote consistency in plan implementation as future changes occur in development trends and the physical form of the community as well as the government leadership.

The following goals were developed by the Comprehensive Plan Steering Committee. The goals are organized by the individual elements of the comprehensive plan, and include:

Land Use

Vision Statement: To create a positive community identity by preserving the City's historic character; enhancing existing neighborhoods; creating new neighborhoods served by schools, parks and open space; attracting a strong employment base; and, implementing design standards for all development in the City and particularly along the major entrances to the City.

- GOAL 4.1: Achieve growth through a deliberate planning process that emphasizes an orderly, compact, and cost efficient land use pattern. GOAL 4.2: Provide for appropriate and compatible uses within the area of influence of the La
- Porte Municipal Airport.
- GOAL 4.3: Provide for recreational, cultural, community, and activity facilities which are accessible and appropriately located and integrate them into the master transportation plan.
- GOAL 4.4: Encourage an active, viable downtown with a variety of uses.
- GOAL 4.5: Provide an appropriate amount of land for various densities and types of residential uses and ensure the highest quality living environment.
- GOAL 4.6: Future development should be implemented with high regard for the physical and natural environment.
- Control development along State/County designated major thoroughfares through GOAL 4.7: enhanced regulation.
- GOAL 4.8: Ensure that all existing and future commercial development is attractive, highly utilized, and without negative influence on adjacent residential uses.
- GOAL 4.9: Attract diversified industry that will contribute to the tax base as well as provide jobs for a variety of workers in the community without conflicting with other land uses in La Porte while encouraging younger citizens to remain in the community.
- GOAL 4.10: Develop a positive working relationship with the County and State in regards to mutual goals for development of lands and thoroughfares within the City limits.

Transportation

Vision Statement: La Porte's transportation system shall provide residents and visitors safe, efficient and convenient access to all areas of the City and the surrounding region; accommodate current and future demand for movement of people and goods; and allow travelers choices of destinations, routes and modes of travel.

- GOAL 5.1: Establish a hierarchy of thoroughfare classifications that will provide for safe and convenient flow of traffic throughout the community.
- GOAL 5.2: Provide continuity of traffic flow within and between neighborhoods and throughout the community.
- Provide for relief of traffic congestion. GOAL 5.3:
- GOAL 5.4: Eliminate major barriers to traffic movement.
- GOAL 5.5: Upgrade and improve existing street infrastructure to meet or exceed minimum standards by Year 2020.

Chapter 2

- GOAL 5.6: Provide for the increasing demand for transportation facilities while preserving and enhancing the attractiveness of the environment.
 GOAL 5.7: Establish and maintain a network of new and existing sidewalks as a component of improved standards for City streets.
 GOAL 5.8: Cooperate with neighboring communities to establish interurban modes of transportation.
- GOAL 5.9: Expand the Municipal Airport and create a self-supporting operation.

Utility Systems

Vision Statement: To be a City that provides residents with efficient and environmentally sound, reliable, accessible and cost effective municipal services. To offer business and industry competitive utility rates with service capacities to accommodate their municipal service demands.

<u>Drainage</u>	
GOAL 6.1:	Explore creative uses of dra

- GOAL 6.1: Explore creative uses of drainage facilities.
 GOAL 6.2: Provide adequate drainage/prevent flooding.
- GOAL 6.3: Design drainage facilities for safety.
- GOAL 6.4: Improve public awareness of the City's drainage systems.
- GOAL 6.5: Incorporate public health concerns in drainage facility construction and maintenance.

Potable Water System

- GOAL 6.6: Assure that drinking water meets the highest standards for quality.
- GOAL 6.7: Operate and maintain the water system such that all areas of the City will have adequate water pressure.
- GOAL 6.8: Conserve water usage.
- GOAL 6.9: Plan for long range water supply.

Sanitary Sewer System

- GOAL 6.10: Prevent infiltration into the sanitary sewer system.
- GOAL 6.11: Utilize wastewater effluent rather than releasing it into the bay.
- GOAL 6.12: Ensure adequate treatment capacity.
- GOAL 6.13: Develop a City utility map.
- GOAL 6.14: Assure adequate capital funding for infrastructure improvements.

Refuse Collection System

- GOAL 6.15: Maintain an effective refuse collection system.
- GOAL 6.16: Improve the aesthetics of the refuse pick-up system.

Parks and Recreation

Vision Statement: To provide citizens of La Porte with a first-class parks, recreation and open space system that offers a variety of activities and facilities for the enjoyment and use of all persons in the community and provides linkages between neighborhoods, schools and parks. The City will seize its opportunities provided by its natural amenities such as Little Cedar Bayou and Galveston Bay to develop recreational and educational programs for residents and visitors.

- GOAL 7.1: Promote the conservation of natural resources through acquisition of parks and recreation areas, preservation of open space, and environmentally sensitive planning.
- GOAL 7.2: Provide a diverse blend of parks, recreation and open space areas including community and neighborhood parks, mini-parks, natural open space areas, and linkages, to adequately accommodate the current and future needs of La Porte's residents and visitors.
- GOAL 7.3: Create and maintain an accessible parks and recreation system for enjoyment by residents and visitors alike.
- GOAL 7.4: Establish cooperative agreements and coordinated efforts with other governmental jurisdictions, educational bodies, and private sector entities.
- GOAL 7.5: Establish a parks and recreation improvement program, including redevelopment of existing areas, and maintenance, improvement and renovation of all public areas and facilities.
- GOAL 7.6: Provide parks and recreation opportunities oriented around water-related activities and programs, including swimming pools and the bay front area.
- GOAL 7.7: Develop a network of pedestrian and bicycle ways throughout the La Porte area, including an interconnected system of paths, trails, lanes, and routes that are multipurpose, accessible, convenient, and connect to residential neighborhoods, parks, schools, workplaces, shopping, major open spaces, and other destinations.
- GOAL 7.8: Preserve and enhance the education, appreciation, and preservation of local historic and cultural resources.

Community Facilities and Services

Vision Statement: To be a City that offers quality municipal facilities and services for the use and enjoyment of residents, including responsive fire and police protection; diverse parks and recreation areas and facilities; and other quality government facilities and services.

- GOAL 8.1: Maintain adequate provision of police services and continue to fulfill the mission of the Police Department.
- GOAL 8.2: Maintain an excellent level of fire safety services provision and continue to fulfill the mission of the Fire Department.
- GOAL 8.3: Support the Edith Wilson Public Library to maintain its growth and utilization and continue to provide quality educational services.

Chapter 2

GOAL 8.4: Provide adequate administrative building space for the delivery of quality services

to the public.

GOAL 8.5: Provide citizens of La Porte with adequate health care facilities and services.

Residential Development

Vision Statement: To be a City that provides safe, affordable and quality residential neighborhoods that are sound and stable offering a variety of housing opportunities that meet the City's current and future needs.

- GOAL 9.1: Revitalize and rehabilitate existing housing in the community where needed.
- GOAL 9.2: Meet the future housing needs in La Porte by providing for a variety of housing options.
- GOAL 9.3: Recognize manufactured homes as a viable housing option.
- GOAL 9.4: Establish incentives for rehabilitation or replacement of substandard housing.
- GOAL 9.5: Promote a standard of home ownership encouraging aesthetically pleasing and well maintained residential properties.
- GOAL 9.6: Preserve the integrity of existing neighborhoods and create livable and safe neighborhood environments.
- GOAL 9.7: Protect the attractive appearance and environmental quality of existing low-density residential neighborhoods and make necessary improvements to maintain the value of properties and enhance the quality of life.

Beautification and Conservation

Vision Statement: To be a City that conserves its natural resources and facilitates a quality natural and built environment through preservation and enhancement of the visual environment. The City will establish high standards to ensure quality development that is aesthetically cohesive and in harmony with the character of the community.

- GOAL 10.1: Improve the community character of La Porte to make it a desirable place to live, work, and visit.
- GOAL 10.2: Improve the aesthetic visual environment of La Porte through enhancement of site design, signage, roadways, parking areas, open-space, and landscaping.
- GOAL 10.3: Invest in Downtown La Porte to establish a vibrant mix of places to work, live, and visit, with shops, restaurants, places of entertainment, and a variety of dwelling units.

Public Safety

Vision Statement: The City will effectively protect its citizens and visitors from crime, natural disaster, personal harm, and other emergencies by providing safety and security through provision of responsive fire, police, emergency medical services, and other City services.

- GOAL 11.1: Maximize public safety and assure protection of citizens during and after emergencies.
- GOAL 11.2: Ensure public safety through adequate provision of key public services.

Redevelopment

Vision Statement: The City will seek to maintain and enhance its historic character, neighborhood integrity, visual appearance, and quality of life through reinvestment programs and incentives to redevelop the older and deteriorated areas of the community.

- GOAL 12.1: Stabilize and improve the quality of neighborhoods and other areas in decline by attracting renewed private investment activity.
- GOAL 12.2: Revitalize the City's historic downtown area.

Implementation

Vision Statement: To be a progressive City with a government that actively and aggressively pursues its vision for the future through implementation of the La Porte Comprehensive Plan Update.

- GOAL 13.1: The City shall be accountable to the citizens of La Porte for meeting the goals, objectives and policies set forth in this and future comprehensive plans.
- GOAL 13.2: Establish and maintain strong citizen and organizational support of the La Porte Comprehensive Plan Update to ensure continued updating and implementation.
- GOAL 13.3: Implement and annually update a five-year Capital Improvements Program (CIP).
- GOAL 13.4: Develop alternative to finance the construction of infrastructure extensions supporting new development as the city grows.
- GOAL 13.5: Revise existing ordinances and adopt new ordinances as necessary to implement the La Porte 2020 Comprehensive Plan Update.

RESOLUTION NO. 2001-01 SUNSET REVIEW OF THE PORT OF HOUSTON AUTHORITY

A RESOLUTION ENCOURAGING AREA LEGISLATORS TO SUPPORT HOUSE BILL 564 WHICH PROPOSES THAT THE PORT OF HOUSTON BECOME SUBJECT TO SUNSET REVIEW LEGISLATION

WHEREAS, after 73 years of operation, it is time for a thorough re-examination of the political, economic and operational characteristics of the Port of Houston Authority. The Port Authority needs to be held accountable to the public it serves for the manner in which it finances its operations, manages public funds, provides for meaningful public participation in rule making and other decisions, and effects through its operations homeowners, business, and the fragile ecosystem of Galveston Bay.

WHEREAS, Texas law (found in §325.01 of the Government Code) provides for Sunset review of all state agencies. Sunset review is the regular assessment of the continuing need for a state agency to exist. The review process also provides a mechanism for lawmakers to look closely at each agency and make fundamental changes to its mission or operations, if needed.

WHEREAS, State Representative Rick Noriega has introduced House Bill 564, co-authored by State Representative John Davis, to make the Port of Houston Authority subject to the Sunset Review Process.

BE IT THEREFORE RESOLVED BY THE CITY OF SHOREACRES, STATE OF TEXAS:

THAT, the City of Shoreacres encourages area legislators to support House Bill 564 and require accountability from the Port of Houston Authority.

AND IT IS SO ORDERED.

PASSED AND APPROVED ON THIS 26th DAY OF FEBRUARY, 2001.

ATTEST:

SHARI TAIT

CITY SECRETARY

RESOLUTION NO. 2000-07

PROTECTION OF BAYPORT INDUSTRIAL DISTRICT ENVIRONMENTAL STANDARDS

A RESOLUTION ENCOURAGING AREA CITIES, RESIDENTIAL COMMUNITIES, BAYPORT INDUSTRIAL DISTRICT INDUSTRIES (BID) AND THE ASSOCIATION OF BAYPORT COMPANIES (ABC) TO TAKE ACTIONS NECESSARY TO SEE THAT ENVIRONMENTAL STANDARDS CONTAINED IN THE BAYPORT INDUSTRIAL DISTRICT DEED RESTRICTIONS ARE PRESERVED AND ENFORCED TO PROTECT THE HEALTH, SAFETY AND WELFARE OF THE SURROUNDING AREA.

WHEREAS, the creators of Bayport Industrial District (Humble Oil & Refining Co., Land Division, and later Friendswood Development Company) established Bayport Environmental Standards, in the form of Deed Restrictions, to insure proper use, appropriate development and improvement of the land within Bayport Industrial District ("BID") so as to protect surrounding landowners in residential and commercial areas from property depreciation and health impairment, as well as protecting plant site owners from improper uses of other plant sites in BID;

WHEREAS, these Deed Restrictions, that run with the land, regulate such matters as noise, light, odors, toxic discharges, liquid wastes, surface drainage, and other activity that could affect the use, enjoyment, health and property values of surrounding residential communities, as well as existing BID industries;

WHEREAS, the proposed Bayport Container Facility as designed by the Port of Houston Authority ("PHA"), threatens the preservation of property values, existing land uses, health and use, and enjoyment of the surrounding owners/users of residential properties and BID industries;

WHEREAS, the local residential communities, cities and existing industries at Bayport Industrial District and ABC have a common and continuing interest in the proper enforcement and integrity of these Deed Restrictions and the goals for which they were designed;

WHEREAS, the Bayport Industrial Association (now Association of Bayport Companies – "ABC") was created by these Deed Restrictions to administer and enforce these environmental standards:

BE IT THEREFORE RESOLVED BY THE CITY OF SHOREACRES, STATE OF TEXAS:

THAT, the City of Shoreacres encourages all local cities, residential communities, all individual BID industries and ABC to fully investigate and take actions necessary to see that these Environmental Standards, and the purposes for which they were created, are fully enforced and preserved so that the health, property values and land uses for all residential, commercial and BID industrial owners/users are maximized, as intended.

AND IT IS SO ORDERED.

Resolution No. 2000-07 Page 2

PASSED AND APPROVED ON THIS 11th DAY OF SEPTEMBER, 2000.

ATTEST:

CITY SECRETARY

RESOLUTION

A RESOLUTION OF THE CITY OF 99-07 IN OPPOSITION TO THE PROPOSED PORT OF HOUSTON AUTHORITY BAYPORT CONTAINER FACILITY AND IN FAVOR OF A REGIONAL PORT CONCEPT FOR GALVESTON BAY.

WHEREAS, the Port of Houston Authority has proposed a <u>container facility</u> at Bayport that will require <u>utilization</u> of over 1000 acres and will generate peak traffic demand at build out of approximately 7000 trucks per day, and

WHEREAS, the Bayport container facility plan was prepared by the Port of Houston Authority without a public participation process that allowed stakeholder input to the design process; and

WHEREAS, the Bayport container facility will generate significant air quality impacts from the diesel trucks, diesel ships, diesel cranes and diesel vehicles that will be active at the Bayport container facility; and

WHEREAS, the Bayport area is currently violating the federal health-based standard for ozone air pollution; and

WHEREAS, monitoring data indicate that the federal health standard for fine particle air pollution is being exceeded downwind of the Bayport facility, and

WHEREAS, the Bayport container facility is adjacent to residential development at El Jardin del Mar, Seabrook and Shoreacres that will be negatively impacted by the noise, light and air pollution from the Bayport facility; and

WHEREAS, residential areas throughout the Bay Area will be negatively affected by traffic and air pollution generated by Bayport, and

WHEREAS, Galveston Bay is a nationally-important estuary, and

WHEREAS, the likelihood exists that the Bayport Container facility ultimately will be dredged to 50 or more feet to accommodate the mega-ships that are being constructed today; and

WHEREAS, a channel constructed to a depth of 50 or <u>more</u> feet into the Galveston Bay system as far up as Bayport would increase salinity levels and decrease <u>maxino</u> productivity in Galveston Bay, and

WHEREAS, other sites exist in the Galveston Bay system that are not adjacent to residential development; and

WHEREAS, other sites exist in the Galveston Bay system that are better served by rail than is the Bayport site and would generate less truck traffic and less air pollution than would Bayport; and

WHEREAS, one site exists in the Galveston Bay system that is already approved for 50 foot channel depths and will have significantly less impact to the Galveston Bay system than would a 50 foot channel to Bayport; and

WHEREAS, a <u>regional</u> approach to container facility siting that considers the entire Galveston Bay system is desirable; and

WHEREAS, a regional approach to container fiscility siting could provide for the public involvement and stakeholder participation that dever occurred prior to the development of the plan for the Port of Houston Bayport facility.

BE IT THEREFORE RESOLVED BY THE CITY OF Shoreacre THAT:

- 1. The city is <u>opposed</u> to the <u>permitting</u> <u>licensing</u> and construction of the proposed Port of Houston Authority Bayport <u>container</u> facility.
- 2. The city is <u>committed</u> to a <u>regional container</u> port <u>string process</u> that <u>considers all</u> reasonable sites within the <u>Galveston Bay system</u>, fully develops environmental and economic information as part of the input into the string process and fully integrates stakeholders into the process and considers their input in the decision-making process regarding regional port site selection.

PASSED AND APPROVED ON THIS 12th DAY OF JULY, 1999

Mayor, City of Shoreacres

ATTEST

Shari Tait, City Secretary

RESOLUTION NO. 98-09

WHEREAS, the City of Shoreacres has been a tranquil, bayside residential community with a small town atmosphere for fifty years; and

WHEREAS, Shoreacres has chosen not to pursue any industrial enterprises which may disturb the peace and tranquility enjoyed by its residents; and

WHEREAS, the Houston Port Authority plans expansion of the Bayport complex, including a large scale railroad yard loading and unloading containers which will be utilized by 7,060 trucks per day and 57 trains per week; increasing heavy traffic on Choate Rd. and Highway 146, streets our citizens travel every day, and

WHEREAS, the peace and tranquility of the citizens of Shoreacres will be disturbed by noise, light, water, and air polution from the 24 hours a day operation of trains, cranes, and other heavy equipment; and

WHEREAS, there will be increased health risks from truck diesel fumes and chemicals transported by trucks, rail, and shipping vessels; and

WHEREAS, there will be a potential for spills of chemicals and other hazardous materials due to the increased transportation of these; and

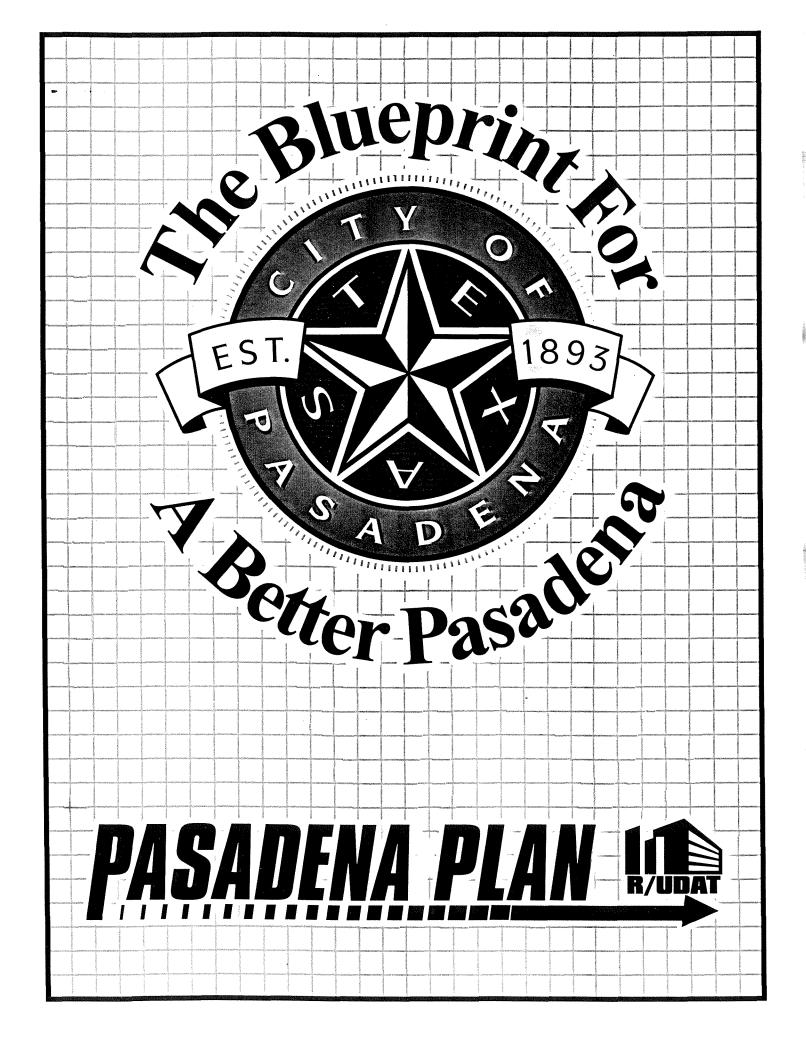
WHEREAS, the Houston Port Authority expansion calls for the destruction of over 100 acres of federally protected wetlands; and

WHEREAS, the residential property values will decrease because of the aforementioned noise, light, water, and air polution, increased traffic, and disruption of the quality of life that draws people to this area, reducing the tax base the city is dependent on; and

WHEREAS, the City of Shoreacres has less than 125 vacant lots and has little opportunity for future growth and is therefore entirely dependent on maintaining and raising current property values to support the <u>annual</u> budget; now therefore,

BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF SHOREACRES TEXAS:

Section 1. The City Council of the City of Shorecres hereby expresses its opposition to the expansion of the Houston Port Authority into our predominately residential communities and asks that an alternative site in a suitable community be considered.



Pasadena Plan participants represented the broad spectrum of people that make up Pasadena in terms of age, ethnicity and race, socioeconomic status, education and a variety of other characteristics. Their diversity was one of two primary strengths at this project's core; the other was a concern shared by all participants for the quality of life that Pasadenans will enjoy in the future. These two common denominators, each complemented by the other, represent a solid foundation underlying the Pasadena Plan and its 67 goals for Pasadena's growth and improvement.

While diversity is an easy term to grasp, "quality of life" represents a concept that is more difficult to pin down. In the context of this drive to set ambitious but achievable goals for Pasadena's future, it means that the next generation of Pasadenans should continue to live in a city recognized as a place of opportunity. This will hinge on the city's success in implementing the Pasadena Plan, particularly with regard to several key elements which represent cornerstones of Pasadenans' vision for their city. These elements, or themes, should become (or, in some cases, remain) a focus of our city's leadership in the years ahead; in no particular order, they are as follows:

Public safety: Pasadena should be a city where people are (and feel) safe in their homes and neighborhoods, on their streets and in their businesses, and all projects recommended in this plan should be carried out with an eye to-

- ward the security (real and perceived) of residents and visitors.
- Infrastructure needs: Streets, drainage and similar functions must remain a priority in Pasadena, for if the city's most basic operations cannot be carried out properly, there is no reason to expect that we will draw newcomers to visit or stay.
- Appearance/beautification: It is inevitable that Pasadena's physical environment and appearance will affect its social environment by helping to create a certain mindset and perception of the community among those who live and work here and those who visit. Recognizing this, our community must strive for continuous improvement in its appearance through incentives for compliance and penalties for refusal to meet standards agreed upon by a majority of Pasadenans.
- Neighborhood integrity/preservation:
 A core strength of any city is the quality of its neighborhoods -- if people do not have a pleasant place to live, they will leave. Since no group is stronger than the weakest of its individual members, it is essential that the city continue to work toward achieving the highest standards of quality in all of its neighborhoods by preventing unwanted business encroachment, ensuring that all housing meets minimum standards for decency, and maintaining an environment in which every per-

son recognizes and respects the rights of those living and/or working in proximity to him or her.

Communicative, responsive government: Continued emphasis must be placed on building stronger partnerships between citizens and their municipal government through regular, constructive interaction with community groups and individuals by local government, and vice versa. At its most basic level, any government represents nothing more than a collection of individuals, and citizens and government must recognize the need for each to help the other toward improvement by pursuing the ideals of consensus, communication, caring and common sense. Toward this end, many of the projects recommended as part of the Pasadena Plan should be implemented only after extensive public input is collected regarding their specifics. This focus on continued expansion and encouragement of citizen involvement should apply to any necessary revision of the Pasadena Plan warranted by circumstances not foreseen during its assembly.

Marketing/image: Pasadena may have room for improvement, but it remains a desirable place to live and work. As we continue to grow in the areas noted above, we must make sure that the message of our progress is delivered to those within and outside this city. Perception is reality, and all the improvements in the world will not be enough if the city does not focus on establishing a positive mindset among those who live, work or visit here.

In reviewing the Pasadena Plan's final draft, we must emphasize one other point: while implementation of these projects is important, ensuring their continued success is equally essential. The planning and implementation of any physical improvements outlined herein should include a maintenance plan (including necessary future funding) for such projects, and recommended programs' implementation should be followed by regular evaluation to ensure that the desired results are achieved.

By focusing on these themes, and by demonstrating a commitment to progress through implementation of the recommendations made herein by the citizens of Pasadena, this community will continue the string of successes that have marked its first 103 years. This is not just the responsibility of those at Pasadena City Hall or the city's other public institutions; it is incumbent upon each and every citizen of Pasadena to find ways to make this city a better, stronger, more dynamic and consistently improving entity. Should even one of us fail to keep our community's betterment at the forefront of our thoughts, we will fall short of our potential for success. We must not let this happen; instead, we must draw closer together, focus on the future while not neglecting the principles and practices that have brought us this far, and forge ahead in a spirit of cooperation, progress and good will. This work will never be finished, but by banding together we will guarantee ourselves a future where obstacles become opportunities and dreams become reality.

This statement has been reviewed by the Core and Steering committees, and represents consensus of the members of those groups.

OPENING STATEMENT

Recognizing the potentially significant impact that entertainment- and tourism-related money can have on a municipality's local economy, we recommends that Pasadena make a strong effort to create for itself an environment and image that are visitor-friendly. While a few cities across America have been successful in creating totally new identities for themselves as part of similar programs, positive results appear more easily achieved by building on existing attributes. With that in mind, it is the committee's suggestion that Pasadena play on themes that have always been with us, though they have at times been subdued or allowed to become negative reflections on the city's image. Included among these are the city's "country" image, our status as a site of some historical importance, and our location adjacent to the nation's fourth-largest city, the world's largest chemical-manufacturing complex and Galveston Bay.

Efforts to make Pasadena more appealing to outsiders can be broken into three subcategories: creating attraction(s), developing support businesses (hotels, restaurants, etc.) for those who visit the attractions, and marketing the attractions. Particularly in the final area, Pasadena is lacking; while the city already includes or is near features such as the Vince's Bridge and Santa Anna capture sites, the San Jacinto Battleground and Monument, the Armand Bayou Nature Center and NASA's

Johnson Space Center, these attractions are left for other cities to claim. At the same time, the Pasadena Convention Center needs to continue expansion of its marketing efforts. This report addresses all three facets of developing a tourism/visitor-based economy, recognizes each as equal to the others in importance, and recommends implementing all three simultaneously, letting whatever momentum is amassed on one front help spur growth in the other two areas.

Finally, it is important to note that improvements such as those noted below are not intended for the sole use of those from other cities or states. The recommended projects will allow us as Pasadenans to spend more of our entertainment dollars at home instead of taking them to Houston or other locales. And while we can certainly boost Pasadena's reputation as a place to visit through such improvements, we can also improve our community's appeal as a place to live and work by making it a city that offers its residents the opportunity to enjoy their evenings, weekends and days off from school or work without leaving town.

GOALS/TIMELINE

Priority #1 (Immediate): Take aggressive steps toward development of an family-oriented entertainment complex that would provide a variety of entertainment. Potential aspects of the development might include a res-

taurant, memorabilia collection, recording studio, and dance hall/concert facility capable of accommodating performances by regional and national acts.

Priority #2 (Immediate): Seek out and recruit developers of hotels and restaurants with the goal of attracting such establishments to Pasadena. By interviewing restaurant and hotel industry members and/or experts, and by conducting market studies where necessary, a program can be outlined by which the city can attract these amenities. Part of this will involve studying potential obstacles to development of upscale restaurants and a major hotel in Pasadena, and working to eliminate those obstacles wherever possible. Examples of such steps will likely include offering of financial incentives to developers willing to share the risk of such new ventures, and rescinding the restrictions on alcoholic beverage sales in north Pasadena (lifting of the "dry" regulations should be paired with new rules that limit alcohol sales to restaurants and similar establishments where food is the primary draw).

Priority #3 (Immediate): Place greater emphasis on the city's place on the Texas Freedom/Independence Trail, and on the historical sites present in Pasadena. Directional signs to important historical sites should be evaluated to ensure maximum effectiveness in pointing visitors and local residents to these locations, which will be developed further as part of the historical park theme laid out in the natural resources section.

Priority #4 (Immediate): To help counter negative impressions of Pasadena by outsiders, and to impress upon others the positive

strides being made by the city, develop and implement a comprehensive marketing strategy with funding from the hotel/motel tax. Pasadena's location as a hub from which to see many Gulf Coast attractions can be emphasized as a drawing card, along with existing local sites and activities of interest (more can be added as other elements of the overall plan are put into action). The following elements are suggested as part of a Pasadena marketing drive:

- Place advertisements in regional and national magazines, targeting various aspects of Pasadena's appeal to specific audiences such as outdoor and boating enthusiasts, recreational vehicle owners/users, music fans, Texas travelers, and petrochemical industry members and affiliates;
- Create a telephone hotline to provide information on Pasadena as a travel stop or destination to interested parties;
- Create topic-specific literature (targeted to audiences like those noted above) for mailout and for distribution at visitors' centers, airport kiosks, etc;
- Create a local tourism bureau that will provide visitors and residents with information on local attractions and highlights.

Priority #5 (Mid-range): Take measures necessary to attract a major or minor league professional sports franchise to Pasadena, with baseball or soccer being likely candidates.

Priority #6 (Mid-range): Develop a "farmer's market," modeled after similar successful ventures in other major cities, where vendors can sell produce, arts and crafts and

other items (with close supervision to prevent the emergence of a "flea market" image) to citizens in a comfortable, "country" atmosphere.

Priority #7 (Short-range): Capitalize on the city's access to Galveston Bay by pursuing development of a regional marina/resort facility along the city's bay frontage. Possible elements could include boat slips, one or more restaurants, retail shops and a hotel.

Priority #8 (Mid-range): Develop a major recreational-vehicle park to accommodate annual RV club gatherings and other visitors throughout the year.

Priority #9 (Short-range): Seek designation as an All-American City (or similar distinction through a like program), thereby increasing recognition of Pasadena's strengths by those outside the city.

CITY OF MORGAN'S POINT COMPREHENSIVE PLAN 1996



CITY OF MORGAN'S POINT PLANNING AND ZONING COMMISSION

The Comprehensive Plan

City of Morgan's Point, Texas

This is a comprehensive Plan for the guidance and future development of the City of Morgan's Point, Texas. The City of Morgan's Point is located about 22 miles southeast of downtown Houston, on the extreme east side of Harris County and has shoreline on Galveston Bay, the Houston Ship Channel and the Port of Houston, Barbour's Cut Facilities. Morgan's Point is bound to the west by the City of La Porte. There are three means of access to Morgan's Point by, (1) Barbour's Cut Boulevard, (2) East Main Street and (3) Bayridge Road. Barbour's Cut Boulevard is a primary transportation corridor to the Port of Houston Facility and is a four-lane divided thoroughfare. To the west it intersects SH 146 in La Porte and dead-ends on the east end at the Barbour's Cut port facility. The other two thoroughfares are two lane sections that serve the residential neighborhoods.

Approximately fifty eight (58) percent of the land area of the city is utilized by the Port of Houston as part of its Barbour's Cut facility. This project began in 1970 and the land was condemned to allow for construction. The Port has committed, however, to the development of its existing site prior to any further land expansion. It is worth noting that Morgan's Point had a zoning ordinance in place at the time of the Port project which did not prevent the Port from moving into the community even though it designated the land residential to control development. This plan will attempt to integrate this facility with the

desires of the residents of the city. The Fentress Bracewell Barbour's Cut Terminal is a major container port and has had a great physical and economic impact on Morgan's Point and the surrounding communities. This facility is one of the largest and most modern container ports in the nation and will provide inevitable growth for the city. At the present, excepting the Port of Houston, there are three major industrial and commercial ventures in the city with the remaining development dedicated to single-family residential. Of this residential area, approximately 150± acres is used by Boys and Girls Harbor, a home for dependent children. Some of the finest homes in the area are located along Morgan's Point's bayfront neighborhood, including the Sterling/Osborn Mansion, a retreat of former Texas Governor Ross Sterling. In 1995, after a great deal of effort on behalf of the Morgan's Point Historical District Committee, many of the other historic homes on Bayridge Road were accepted as and incorporated into the Morgan's Point National Historic District.

This plan is designed to integrate the variety of uses that are contained within the corporate limits of the City to provide a "fit" that will serve both industry and the citizens of Morgan's Point. The consensus of the city's population is to continue to develop the available property as residential, to maintain and improve the character of the City. Commercial and industrial property owners are to be considered in a fair and reasonable manner.

In planning for the future, Morgan's Point must consider the following:

- Industrial, Commercial, and Residential Development,
- Leisure Activity,
- Public Uses including Parks and Open Space,
- Traffic Circulation and Pedestrian Access,
- Utility Infrastructure, and
- Capital Requirements for the future.

For Morgan's Point to remain a high quality residential community, these issues must be addressed in a format that incorporates and guides the city toward these future goals. Within the structure of the comprehensive plan the city should define its policies for future economic, environmental, and financial growth based on the desires and objectives of the people of Morgan's Point.

Growing out of this planning process is the development of the Land Use Plan or Master

Plan that embodies the goals and objectives of the Comprehensive Plan.

The Comprehensive Plan is truly comprehensive in nature and specifically addresses each of the following areas:

- Land Use,
- Water and Wastewater Systems,
- Streets and Traffic Circulation,
- Parks, Open Space and Other Recreation,
- Residential Development.

To move toward the goals projected in each of these areas will require action on the city's part and all of these actions should be based on factors such as development, maintaining

the character of the City, and fiscal ability over time. These factors will affect the feasibility of implementing the entire plan.

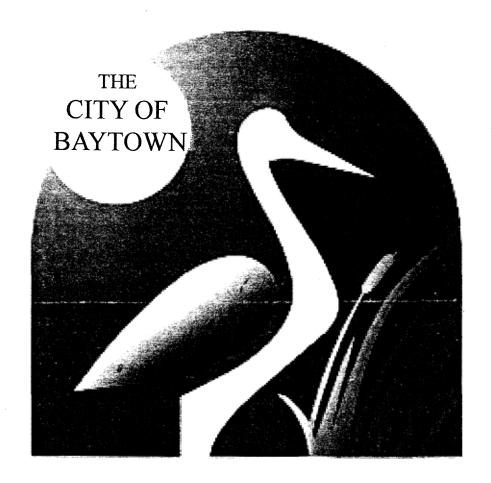
Three of these areas may require capital outlay for Morgan's Point:

- Water and Wastewater,
- Streets and Traffic Circulation, and
- Parks, Open Space and Other Recreational facilities.

The capital improvement plan will be developed as a later adjunct to this document.

The Comprehensive Plan illustrates the city's approach to its own development and will allow the city to realize its goals, in part, through the ongoing enforcement of its zoning ordinance. The zoning ordinance should be looked upon as the tool to implement the goals set forth in the plan not vice versa. The Master Plan or Land Use Plan is intended to further the goals of the Comprehensive Plan as follows:

- Encourage High Quality Residential Development
- Establish Certain "Buffer Zones" Adjacent to the Barbour's Cut Facility
- Maintain and Expand All Existing Greenbelts
- Provide For the Development of Large Undivided Tracts of Property.
- Provide for the Development of Streets as Public Access is Required.
- Provide for the Expansion of Both Water and Wastewater Utilities.
- Provide for the Development the City's Recreational and Open Space Needs.
- Consider the Current Needs and Requirements of the Population.



BAYTOWN 2020



COMPREHENSIVE PLAN

Update Summary 2000

INTRODUCTION

The Baytown Comprehensive Plan Update is an official public document, adopted by the City Council, that will serve as a guide for policy decisions relating to the physical growth and economic development of the community over the next 20 years. In addition to providing a community vision and goals and objectives to work toward through Year 2020, the plan assesses the opportunities and challenges facing the City, identifies important policies and strategies, and sets priorities for an aggressive implementation program that emphasizes specific actions and practical results.

Baytown's updated comprehensive plan is organized into eleven (11) individual plan elements which address the existing conditions, issues, goals, objectives, and action plans for various facets of the community. These elements include:

- 1. Introduction
- 2. Community Vision
- 3. Community Profile
- 4. Land Use and Annexation
- Community Appearance and Image
- 6. Transportation
- 7. Environmental Resources
- 8. Parks and Recreation
- Housing
- 10. Utilities
- 11. Implementation

The geographical planning area encompassed in this plan includes both the incorporated area and the extraterritorial jurisdiction (ETJ) of the City.

The Baytown Comprehensive Plan Update is the result of many hours of consideration and input from the community's residents and leaders. Citizen involvement is the cornerstone of any comprehensive plan. Meetings of the various official groups were supplemented by a major community forum early in the process and many smaller gatherings (neighborhood forums) of residents, business leaders and City representatives across the community. Through extensive community involvement, the comprehensive plan study incorporates the community's values in terms of quality of life, character and scale of development, urban form, aesthetic appeal, and how new development should be integrated with the existing and future city fabric.

COMMUNITY VISION

The Baytown Comprehensive Plan Update is organized and will be implemented using a hierarchy of guiding principles. The overall *Community Vision* is at the top of the hierarchy. A set of community goals follows with supportive objectives, policies, and actions to form the implementation framework and provide direction for the future growth and development of the community. Each element of the plan has a vision statement that is specific to the element and consistent with the overall vision of the community. A "visioning" process was conducted to develop a community consensus on the goals and

objectives that form the framework for the updated Comprehensive Plan. In order to create a shared vision of the future, the process involved city leaders and citizens in a dialogue to identify issues, determine the assets and challenges of the community, and prepare goals and objectives that will shape and define that future.

The vision statements and goals which form the foundation of this plan were developed following identification and thorough review of Baytown's major assets and challenges and key planning issues facing the community through 2020.

"To have a vision means to look ahead – to imagine the future. Visioning is a process by which a community envisions its preferred future."

The Baytown Vision is a broad statement of how the community views itself as it moves into the 21st Century. It is an ideal image of the future based on the community's values.

BAYTOWN'S VISION: To be a community that continues to value "community" first and foremost, capitalizing on its resourceful citizens, community groups, and businesses in the spirit of continuous improvement.

To be a community that celebrates families and community interaction by ensuring diverse and high-quality opportunities for housing, employment, education and recreation.

To be a community that has a positive image and appearance which is recognized and enjoyed by residents and by visitors alike.

To be a community that strives to balance residential, commercial, industrial, and public/institutional development supported by quality infrastructure and transportation systems.

To be a community that places a high premium on the safety of its citizens through effective law enforcement programs and sound development practices that buffer neighborhoods from incompatible development and excessive traffic.

To be a community that celebrates and builds on its rich history, image and population diversity.

To be a community that welcomes visitors and new residents with livable neighborhoods, quality schools, an unmatched parks system, and efficient public service delivery.

To be a community that is prepared for and amenable to new development while recognizing the fundamental importance of its established neighborhoods, commercial corridors and historic areas.

To be a community that appreciates its unusual endowment of land and water resources and continues to be a leader among municipalities in local land acquisition, preservation, and public access techniques.

To be a community that recognizes "smart growth" and sustainable development as more than passing fads and maintains the necessary programs and support for effective growth management.

To be a community known for its progressive public and private leadership, responsiveness to the needs of citizens and businesses, and positive and innovative approaches to community development challenges.

GALVESTON COMPREHENSIVE PLAN

A Shared Vision for Galveston Island

August 2001



City of Galveston, TX

With the Assistance of WRI Wallace Roberts & Todd, LLC **Knudson** Associates

The Plan is the Foundation for All City Policies, Strategies, and Actions

The Galveston Comprehensive Plan is only as valid as the vision which inspires and motivates it, and as the policies, strategies, and actions that will carry it out. It is necessary, but not sufficient, to point the City in the right direction. In order for the City to achieve effective implementation, the Plan must be used to guide day-to-day operations with new coordinating mechanisms that ensure the plan's policies and strategies are followed in all City activities, ranging from rezonings and code enforcement, to priorities set in the Capital Improvement Program (CIP).

· The Plan is the Community's "To Do" List

Comprehensive plans often fall short due to their failure to identify in detail actions, timetables, responsibilities and resources needed. To exert an effective influence on the future of the community, the Galveston Comprehensive Plan has been crafted as a continuum: from *Vision*, to *Goals and Objectives*, to *Strategies*, to concrete *Actions*. In adopting the Comprehensive Plan, the City Council and City administration commit to "staying the course," i.e., to consistently apply the Comprehensive Plan not only as a policy guide, but also as the community's 20-year "to do" list.

1.3 A Shared Wision

The following summarizes our community's **shared vision** for the future of Galveston. The Comprehensive Plan has been constructed upon the foundation of **aspirations and values** reflected in this collective vision.

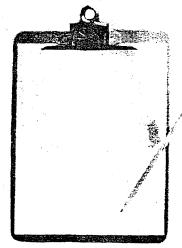
A SHARED VISION...

Galveston has a strong sense of civic pride and belonging.

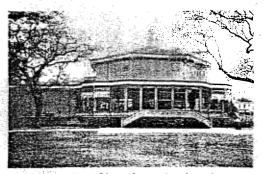
Because long-term planning is the standard on the island, we are positive about our future, and our city and its citizens have the ability to realize their full potential. Galveston citizens have common goals and a shared vision of the future.

Galveston enjoys a diversity of cultures and an atmosphere of trust.

All cultures work together to reach common goals and the spirit of the community grows. Different groups, be they ethnic, religious, political, economic or other, understand and value each other's needs and interests.



The Comprehensive Plan should be thought of as the community's 20-year "to do" list.



Galveston is a City of great cultural attractions and recreational activities.

Galveston is a beautiful place to live, visit, work and do business.

Galveston is a city with well-maintained infrastructure, great cultural attractions and recreational activities. It's neighborhoods, beaches, parks and esplanades are revitalized, safe and beautiful.

Galveston's citizens have positive relationships with city, state and federal governmental agencies.

Our sound educational system, skilled work force, increasing tax base and financial solvency are the basis of Galveston's quality reputation.

Galveston is a city of possibilities.

...and SHARED VALUES

Long-term planning

Quality planning that includes a shared vision of our future direction.

Enhancement of Island aesthetics

Respect Galveston's heritage, encourage preservation of historic resources and enhance Galveston's beaches, parks and roadways.

A strong tax base

Diversify and expand the employment and tax base and promote the creation of well-paying jobs. Provide active support to help grow prosperous and stable minority-owned businesses.

A better future for children

Provide a quality education and personal skill development for all children. Create opportunities for them to serve their community to improve the quality of life.

Strong neighborhoods

Economic development is impossible without successful, attractive, safe and liveable neighborhoods. Neighborhoods and businesses work together to achieve economic development while also enhancing the neighborhoods' quality of life.

Collaboration and accountability

Create opportunities and make it easy for people to participate in decisions that impact their daily lives. Work together towards win-win solutions, enhancing the spirit of our community.



The Plan aims to provide a better future for children in the community.

1.0 Introduction

Value our diversity

Respect, strengthen, utilize and celebrate diversity! Encourage people to appreciate who they really are, help them to develop their full potential and utilize their unique talents, skills and creative ideas.

14 Summary of E

Following this introduction, Chapter 2.0, Socio-Economic Factors, presents population and economic trends and their associated implications for the development of the Comprehensive Plan. The most significant finding in this chapter is that, according to the 2000 Census, Galveston has lost some 3.1% of its population since 1990, continuing the long-term trend toward a declining population. This fact should serve to underscore the mandate to improve the City's housing stock and attract new middle-income housing, in new development as well as in rehabilitation and reuse of the City's large inventory of residential units in historic neighborhoods.

The core of the Comprehensive Plan is presented in Chapter 3.0, Plan Elements. Three of these elements, Housing and Neighborhoods, Economic Development and Community Character reflect key strategic directions which emerged from community input and from the work of the Citizens Steering Committee and related subcommittees. These elements call for bold new initiatives to preserve and revitalize neighborhoods, expand middle income housing, promote economic diversification and improve community aesthetics, particularly at key gateways and corridors such as Seawall Boulevard and Broadway Boulevard.

In addition, a Land Use Element is presented to indicate ways in which zoning and development regulations need to be adjusted to facilitate strategic initiatives in the other elements, to eliminate obsolescence and land use conflicts, and to address pressing issues of public safety such as concern over the ability to evacuate west end residents. However, it must be noted that the goals, objectives, and strategies contained in the Land Use Element do not constitute zoning regulations or establish zoning district boundaries.

Finally, a Historic Preservation Element is provided as a means of establishing a new mandate for leadership by the City of Galveston, in coordinating and supporting the important work of many in the community to preserve Galveston's rich historic heritage.



Galveston is a community that values and celebrates diversity.

APPENDIX F PORTS AND WATERWAYS SAFETY ASSESSMENT INFORMATION

Ports and Waterways Safety Assessment Workshop Texas City, TX August 21, 2000

Attendee List

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Fax	(713) 435- 1616	Fax	(713) 534-6197
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Company Address Phone	Galveston – Texas City Pilots PO Box 16110 Galveston, TX 77552 (409) 740-1671 (personal)	Company Address Phone	Galveston Bay Foundation 17324-A Highway 3 Webster, TX 77598 (281) 332-3381
Company Address Phone Fax	Galveston – Texas City Pilots PO Box 16110 Galveston, TX 77552 (409) 740-1671 (personal) N/A	Company Address Phone Fax	Galveston Bay Foundation 17324-A Highway 3 Webster, TX 77598 (281) 332-3381 (281) 332-3153
Company Address Phone	Galveston – Texas City Pilots PO Box 16110 Galveston, TX 77552 (409) 740-1671 (personal)	Company Address Phone	Galveston Bay Foundation 17324-A Highway 3 Webster, TX 77598 (281) 332-3381
Company Address Phone Fax E-mail	Galveston – Texas City Pilots PO Box 16110 Galveston, TX 77552 (409) 740-1671 (personal) N/A jimcrod@swbell.net	Company Address Phone Fax	Galveston Bay Foundation 17324-A Highway 3 Webster, TX 77598 (281) 332-3381 (281) 332-3153
Company Address Phone Fax	Galveston – Texas City Pilots PO Box 16110 Galveston, TX 77552 (409) 740-1671 (personal) N/A	Company Address Phone Fax	Galveston Bay Foundation 17324-A Highway 3 Webster, TX 77598 (281) 332-3381 (281) 332-3153
Company Address Phone Fax E-mail	Galveston – Texas City Pilots PO Box 16110 Galveston, TX 77552 (409) 740-1671 (personal) N/A jimcrod@swbell.net	Company Address Phone Fax E-mail	Galveston Bay Foundation 17324-A Highway 3 Webster, TX 77598 (281) 332-3381 (281) 332-3153 gbf@electrotex.com
Company Address Phone Fax E-mail	Galveston – Texas City Pilots PO Box 16110 Galveston, TX 77552 (409) 740-1671 (personal) N/A jimcrod@swbell.net Richard Eames	Company Address Phone Fax E-mail	Galveston Bay Foundation 17324-A Highway 3 Webster, TX 77598 (281) 332-3381 (281) 332-3153 gbf@electrotex.com Jeremy Goodson
Company Address Phone Fax E-mail Name Company	Galveston – Texas City Pilots PO Box 16110 Galveston, TX 77552 (409) 740-1671 (personal) N/A jimcrod@swbell.net Richard Eames BP Amoco	Company Address Phone Fax E-mail Name Company	Galveston Bay Foundation 17324-A Highway 3 Webster, TX 77598 (281) 332-3381 (281) 332-3153 gbf@electrotex.com Jeremy Goodson Garner Environmental
Company Address Phone Fax E-mail Name Company	Galveston – Texas City Pilots PO Box 16110 Galveston, TX 77552 (409) 740-1671 (personal) N/A jimcrod@swbell.net Richard Eames BP Amoco 2800 FM 519 East	Company Address Phone Fax E-mail Name Company	Galveston Bay Foundation 17324-A Highway 3 Webster, TX 77598 (281) 332-3381 (281) 332-3153 gbf@electrotex.com Jeremy Goodson Garner Environmental 1717 W. 13 th St.
Company Address Phone Fax E-mail Name Company Address	Galveston – Texas City Pilots PO Box 16110 Galveston, TX 77552 (409) 740-1671 (personal) N/A jimcrod@swbell.net Richard Eames BP Amoco 2800 FM 519 East Texas City, TX 77592	Company Address Phone Fax E-mail Name Company Address	Galveston Bay Foundation 17324-A Highway 3 Webster, TX 77598 (281) 332-3381 (281) 332-3153 gbf@electrotex.com Jeremy Goodson Garner Environmental 1717 W. 13 th St. Deer Part, TX 77536
Company Address Phone Fax E-mail Name Company Address	Galveston – Texas City Pilots PO Box 16110 Galveston, TX 77552 (409) 740-1671 (personal) N/A jimcrod@swbell.net Richard Eames BP Amoco 2800 FM 519 East Texas City, TX 77592 (409) 945-1349	Company Address Phone Fax E-mail Name Company Address	Galveston Bay Foundation 17324-A Highway 3 Webster, TX 77598 (281) 332-3381 (281) 332-3153 gbf@electrotex.com Jeremy Goodson Garner Environmental 1717 W. 13 th St. Deer Part, TX 77536 (281) 930-1200

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	•		
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	•		
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Fax		Fax	
E-mail		E-mail	



Commanding Officer
United States Coast Guard
Marine Safety Office Houston-Galveston

PO Box 446 Galena Park, TX 77547-0446 Phone: (713)671-5100 Fax: (713)671-5147

16610 March 1, 2002

Subj: TEXAS CITY PORTS AND WATERWAY SAFETY ASSESSEMENT (PAWSA) FIRST ANNUAL REVIEW

Dear PAWSA Participants:

The first annual review of the Ports and Waterway Safety Assessment (PAWSA) for the Port of Texas City was conducted on 11 September, 2001. The original assessment was completed on 21 August, 2000. The purpose of the review was to update the status of action items identified in 2000, modify as needed the key assumptions made to reflect changes in trade or environmental factors and assess their impact on the 2000 results, and specifically evaluate the impact of changes in the Texas City International Terminal (TCIT) proposal. The agenda for the session is provided as Enclosure (1), the roster of participants is Enclosure (2).

Enclosure (3) is a summary of the action items identified at the 2000 assessment, along with the corresponding status and future actions for each. Several significant action items have been completed, and were judged by the group to have had substantial impact in mitigating risk. Many other items are still in progress, and were determined to remain valid. I request that the lead agency for each in-progress action item provide a written update on the status, along with recommendations for completion, by 1 June, 2002. Please send updates to the Commanding Officer, Marine Safety Unit Galveston, who will collect and disseminate the status reports.

All of the key assumptions made for the Port Profile in the 2000 assessment were reviewed and validated. All of the assumptions remain valid. Some additional assumptions regarding infrastructure development and changes in trade were added, but none of these significantly changed the 2000 assessment results or produced additional action items for risk mitigation. The summary of the Port Profile review is Enclosure (4).

Finally, a change analysis was conducted to determine the impact of moving the proposed turining basin associated with the TCIT project. When the 2000 PAWSA was conducted, the proposal was to locate the turning basin well clear of the channel in the vicinity of the Sterling Terminal (see Enclosure (5)). The most recent proposal is to move the turining basin east so that it is part of the channel, immediately off of the TCIT dock. (see Enclosure (6)). The baseline for the change analysis was the TCIT proposal as evaluated during the 2000 PAWSA. Using the PAWSA Port Risk Model (Enclosure (7)) as a template to ensure systematic evaluation of the entire waterway system, the work group analyzed each individual risk factor to identify those which were impacted by the change in the turning basin location. Of the 20 risk factors evaluated in the original PAWSA, only four (those associated with waterway configuration) were determined to have been impacted by the relocation of the turning basin. Further analysis of these four risk factors determined that the net impact of the relocation of the turning basin is positive in terms of both waterway safety and economic impact associated with the TCIT proposal. The results of the 2000 PAWSA were therefore considered to remain substantially proposal. Details of the Change Analysis are contained in Enclosure (8).

Subj: TEXAS CITY PORTS AND WATERWAY SAFETY ASSESSEMENT (PAWSA) FIRST ANNUAL REVIEW

Please review the enclosures and forward any comments or concerns to LCDR John Francic, at Marine safety Unit Galveston. This report will be modified as necessary to reflect any of your comments. It is worth noting that this very important PAWSA review took place on September 11, 2001, and that while each of you contributed your time and expertise to ensure the integrity and validity of the assessment, we were all learning of the tragic events of that day. I appreciate your willingness to "stay the course" and complete the review in spite of the obvious distractions and confusion of that morning. Thank you for your continued support of our mutual effort to ensure a safe and efficient marine transportation system.

Sincerely,

⊄aptain, U.S. Coast Guard

Captain of the Port

- Encl: (1) Agenda
 - (2) Roster of Participants
 - (3) Action Item Summary
 - (4) Port Profile Review
 - (5) Original Turning Basin Proposal
 - (6) Current Turning Basin Proposal
 - (7) PAWSA Port Risk Model
 - (8) Change Analysis

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COMDT (G-MWV)

TIME	FUNCTION	PURPOSE	LEAD
0900-0910	Welcoming remarks & introductions	Welcome & introduce all participants	Capt. Cook
0910-0920	PAWSA Process Review	Review purpose, scope and process of the 2000 PAWSA analysis. Set goals for the PAWSA review.	CDR Thomas
0920-1015	Review of 2000 PAWSA action items (note 1)	Establish current status of all risk mitigation action items identified for each risk factor at the 2000 PAWSA. Evaluate effectiveness of those already implemented. Validate need for those still in progress or not yet in progress.	LT(JG) Tieman
1015-1030	Validate 2000 PAWSA key assumptions (note 1)	List specific changes to the current conditions or anticipated trends identified for each risk factor at the 2000 PAWSA. Determine the impact of any changes on the risk mitigation actions identified.	LCDR Francic
1030-1045	Break		
1045-1100	TCIT Turning Basin Proposal	Present details of the new TCIT turning basin proposal.	Sharon Tirpak USACE
1100-1200	Change Analysis – TCIT turning basin.	Identify risk associated with proposed change to location of turning basin. Evaluate impact of change on the 2000 PAWSA results	CDR Thomas
1200-1215	Wrap-Up	Review action items, if any. Review Parking Lot items, if any.	LCDR Francic

Note 1: Participants should review the Texas City PAWSA Report dated 31 Jan 2001 prior to the meeting.

Purpose: Review & validate the results of the 2000 PAWSA for the Texas City Channel. Assess any changes in the key assumptions made in 2000 (vessel traffic, trade, etc) on the results. Specifically assess the impact of changes in the TCIT proposal.

Location: Texas City Port Authority Building, 2425 Hwy 146 North (intersection of Hwy 146 & 197)

PAWSA Workshop Review Attendee List

September 11, 2001

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EIVIAIL.	eamesid@bp.com	EIVIAIL.	crappswd@pp.com
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	Houston TX 77029-4328		Galveston TX 77553
PHONE:	(713) 671-5160	PHONE:	(409) 765-9381 or
EMAIL: stescher	ndorf@VTSHouston.uscg.mil		888-877-5764
		EMAIL: mencad	cci@bayhouston.com
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NAME:			!
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DUONE:		DUONE:	ľ
PHONE:	(409) 744-6311	PHONE:	(409) 740-1671
EWAIL: John.sava	age@gandhtowing.com	EMAIL:	jimcrod@swbell.net
NAME:	Paul Jensen	NAME:	Sharon Tirpak
COMPANY:	PBS&J	COMPANY:	USACE Galveston
	206 Wild Basin Rd	ADDRESS:	P.O. Box 1229
ADDRESS:	_	MUUNESS:	
DUONE.	Austin TX 78746-3343	DUONE.	Galveston TX 77553
PHONE:	(512) 327-6848	PHONE:	(409) 766-3136
EMAIL:	PAJensen@PBSJ.com	EMAIL : Sharon	.tirpak@usace.army.mil

NAME: COMPANY: ADDRESS: PHONE: EMAIL:	Herbie Maurer USACE Galveston P.O. Box 1229 Galveston TX 77553 (409) 766-3966	NAME: COMPANY: ADDRESS: PHONE: EMAIL:	Danny R. Anthony Marathon Ashland P.O. Box 1191 Texas City TX 77592 (409) 943-7237
NAME: COMPANY: ADDRESS: PHONE: EMAIL:	Warner Welch VTS 9640 Clinton Dr FL2 Houston TX 77029 (713) 671-5136 rwelch@vtshouston.uscg.mil	NAME: COMPANY: ADDRESS: PHONE: EMAIL:	John W. Combs Dept Chief Vessel Exam Recreation Boat Safety 7199 Spanish Main Grant Galveston TX 77554 (409) 737-4270 JohnCombs@msn.com
NAME: COMPANY: National Staff ADDRESS: PHONE: EMAIL:	Lenore J. Comos USCG Aux PWC/CONOC, f Small Boats 7199 Spanish Main Grant Galveston TX 77554 (409) 737-4230 ljcombs@juno.com	NAME: COMPANY: ADDRESS: PHONE: EMAIL:	Bill Mathis Port of Texas City Hwy 146N Texas City TX (409) 946-4661 bmathis@railporttc.com
NAME: COMPANY: ADDRESS: PHONE: EMAIL:	Tom Rodino Shiner Moseley & Assoc. 555 N. Carancahua #1650 Corpus Christi TX 78478 (361) 857-2211 trodino@shinermoseley.com	NAME: COMPANY: ADDRESS: PHONE: EMAIL:	Doug Hoover City of Texas City P.O. Drawer 2608 Texas City TX 77592 (409) 643-5927 dhoover@texas-city-tx.org
NAME: COMPANY: ADDRESS: PHONE:	Donald Dovie CP Ships P.O. Box 770262 New Orleans LA 70177 (504) 940-6014 or (504) 250-9901	NAME: COMPANY: Am Terminal ADDRESS: PHONE:	Alex Parkman Stevedoring Services of Judgmerica, Texas City/Intl 928 5th Avenue North Texas City TX 77590 (409) 643-5881
ddovie@amer		EMAIL:	aparkman@ssofa.com
NAME: COMPANY: ADDRESS: PHONE: EMAIL:	lan Pettit Port of Texas City Hwy 146N Texas City TX (830) 640-3413 ipettit@hctc.net	NAME: COMPANY: ADDRESS: PHONE: EMAIL: jttray@compassr	Thomas Tray Compass Maritime for TEPPCO Crude Pipeline 4218 Lake Grove Dr. Seabrook, TX 77586 (281) 474-5132

NAME: Laura Gissen NAME: Tom Horan **COMPANY:** Seaway Crude Pipeline **COMPANY:** CG Group Galveston Co./Teppco Crude Pipeline, P.O. Box 1912 **ADDRESS:** L.P. Galveston TX 77553 **ADDRESS**: P.O. Box 551 (409) 766-4715 PHONE: Texas City TX 77592 EMAIL: thoran@grugalveston.uscg.mil (409) 949-3701 PHONE: LGissen@teppco.com **EMAIL:** LCDR John R. Francic NAME: CDR Paul Thomas NAME: **COMPANY:** U.S. Coast Guard **COMPANY**: MSU Galveston **MSU** Galveston P.O. Box 0149 ADDRESS: P.O. Box 0149 Galveston TX 77553 ADDRESS: Galveston TX 77553 PHONE: (409) 766-5401 (409) 766-5403 EMAIL: PThomas@msugalveston.uscg.mil PHONE: EMAIL: JFrancic@msugalveston.uscg.mil LTjg Jason Tieman NAME: Capt Kevin Cook NAME: U.S. Coast Guard **COMPANY:** MSO Houston-Galveston **COMPANY:** MSU Galveston **ADDRESS:** 9640 Clinton Dr. ADDRESS: P.O. Box 0149 Houston TX 77553 Galveston, TX 77553 PHONE: (713) 671-5199 (409) 766-5440 PHONE: EMAIL: KCook@msohouston.uscg.mil **EMAIL:** JTieman@msugalveston.uscg.mil NAME: **CDR Peter Simons COMPANY:** VTS Houston-Galveston ADDRESS: 9640 Clinton Dr. Houston TX 77553 (713) 671-5100 PHONE: PSimons@vtshouston.uscg.mil **EMAIL:**

RISK MITIGATION STRATEGY

FOLLOW-UP ON ACTION ITEMS FROM 2000 PAWSA STUDY

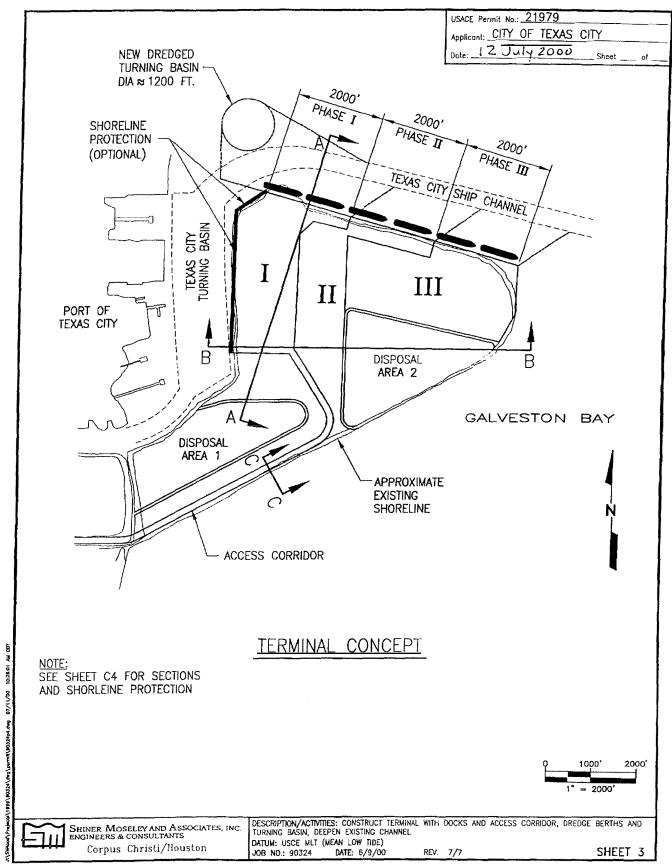
Action Items:	Status:	Future Action:
Address human factors concerns about tug operator and	In progress	
tanker fatigue		work
Harbor Master considers scheduling arrival/departure times to	In progress	1
satisfy growth in traffic		continue work
Consider the need for additional tugs	In progress	
Face and the size is along of the Toyon City Channel	NI= ==ti==	continue work
Ensure new turning basin is clear of the Texas City Channel Formalize the Harbor Master's:	No action	Dropped
1) Relationships	Completed	
2) Authority		
3) Responsibilities		
Address facility issues in the harbor for tugs and barges	No action	TC Port to
		continue work
Install pilings or moorings and establish a barge fleeting area	No action	USACE/ TC Port
to relieve congestion in Bolivar Roads without creating		to continue work
congestion in Texas City		
Refine scheduling so that barges arrive when dock is available	No action	TC Port to
		continue work
Trim NW corner at Shoal Point to widen channel and to open	Completed	
visibility at the entrance to the harbor	Compositor	, , , , , , , , , , , , , , , , , , , ,
Consider using alternate frequency for vessel traffic control and VT control	Completed	
Enhance Ports or Ports—like system to provide real-time wind	No action	TC Port to
velocity and direction information	INO action	continue work
Explore AIS as an additional new tool	In progress	VTS to continue
Explore the de air additional new tool	m progress	work
Ensure that the design of new container terminal has the	Completed	
minimum impact on visibility around the Horn	•	
Conduct WAMS of Texas City Channel after new container	No Action	D8 (oan) to
terminal is built		establish
Enhanced traffic advice and surveillance in the Texas City	In progress	VTS to continue
Channel		work
Dredge SE corner of the Texas City "Y"	In progress	USACE to
Trim of the NW corner of Snake Island at the Horn to ease the	Completed	continue work
	Completed	
turn angle Ensure that the relocated pipeline is deep enough to ensure	In progress	USACE to
ships needing to anchor in an emergency can't catch it	in progress	continue work
Identified for Channel Width risk factor	In progress	USACE to
Tachting for Charmor Water hor lactor	progress	continue work
Harbor Master coordinates after hour access to decision-	Completed	
making personnel from potential spill source companies		
Complete the developing Area Contingency Plan for chemical	In progress	COTP to continue
spills		work
Enclosure (3)		

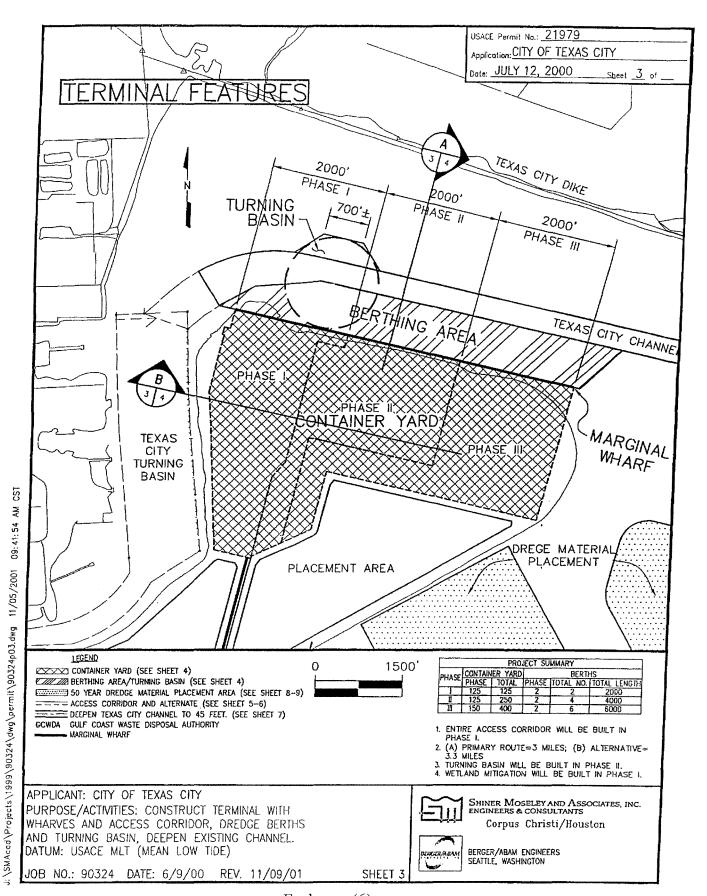
Work more closely with the local Office of Emergency	In progress	TC Port to
Management		continue work
Explore new synergies for container inspections	In progress	COTP to continue
		work
Study the impact of storm surge on various parts of port area,	In progress	TCIT/ TC Port to
particularly planned container terminal		continue work
Post storm survey channel	In progress	TC Port/USACE
		to continue work
Use container stacking methods to reduce damage during	In progress	TCIT to continue
storms		work
Use harbor methods to certify channel post storm	In progress	TC Port to
		continue work
Review and update ATON post storm reconstruction plan after	No action	Change lead
development of TCIT		Pilots/USCG ANT
Improve marine fire fighting capability	In progress	COTP/TC Port to
		continue work
Require the use of vapor controls in transferring products		Dropped
between ships		
Conduct in exercise to validate adequacy of alert and	In progress	Change lead to
evacuation plans		IMAS

Port of Texas City Port Profile FOLLOW-UP ON ACTION ITEMS

FROM 2000 PAWSA STUDY

Waterway Navigation Attributes:	Status:	Addition Items:
Ship Channel Complexity	No Change	
Ship Channel Configuration	No Change	
Ship Channel Traffic	No Change	
Recreational Activity	No Change	
Local Fishing Activity	No Change	
Bottom	No Change	
Currents	No Change	
Wind	$ADD \rightarrow$	Winter cold fronts draw water out of bay
Visibility	No Change	
Aids-to-Navigation (USCG & Private)	No Change	
Vessel Traffic Systems (VTIS/VTS)	$ADD \rightarrow$	Port of Texas City oversight of vessel traffic
Situation Awareness (Each Ship)	No Change	
Planned Infrastructure Developments	$ADD \rightarrow$	-Increase width of industrial canal -Add barge traffic lanes -Build two ship dock in the industrial canal
Changes in Levels and/or Nature of Waterway Activities	ADD →	-Increased coke export -Increased shuttle tankers -Increase in refined petroleum and chemical imports.
Forecast Traffic Levels	$\mathrm{ADD} \rightarrow$	Increase forecast levels to 2,700 ships and 16,000 barges into year 2020
USCG Regulations to be Implemented	$ADD \to$	-Terminal security issues -Third planned regulation area -TNRCC/EPA regulations to air quality.
Changes under Consideration, but not Committed	No Change	





Port Risk Model

FLEET COMPOSITION	TRAFFIC CONDTIONS	NAVIGATIONAL CONDITIONS	WATERWAY CONFIGURATION	SHORT-TERM CONSEQUENCES	LONG-TERM CONSEQUENCES
	· ,			***************************************	***************************************
% HIGH RISK DEEP DRAFT CARGO & PASSENGER VESSELS	VOLUME OF DEEP DRAFT VESSELS	WIND CONDITIONS	VISIBILITY OBSTRUCT - IONS	NUMBER OF PEOPLE ON WATERWAY	ECONOMIC IMPACTS
% HIGH RISK SHALLOW DRAFT CARGO & PASSENGER VESSELS	VOLUME OF SHALLOW DRAFT VESSELS	VISIBILITY CONDITIONS	PASSING ARRANGE - MENTS	VOLUME OF PETROLEUM CARGOES	ENVIRON- MENTAL IMPACTS
	VOLUME OF FISHING & PLEASURE CRAFT	CURRENTS, TIDES AND RIVERS	CHANNEL AND BOTTOM	VOLUME OF HAZARDOUS CHEMICAL CARGOES	HEALTH AND SAFETY IMPACTS
	TRAFFIC DENSITY	ICE CONDITIONS	WATERWAY COMPLEXITY		

Enclosure (7)

Baseline = 2000 PAWSA w/C	- ;		A Review: Change And ng Basin Location on 2	alysis – Impact of Change 2000 PAWSA Results	Date:9/11/01
Port Risk Factor	Change in	risk factor due to n of turning basin	Impact on Safety	Impact Economic	Comment
Fleet Composition					
% High Risk Deep Draft Cargo and Passenger Vessels	No change		None	None	
% High Risk Shallow Draft Cargo & Passenger Vessels	No change		None	None	
Traffic Conditions					
Volume of Deep Draft Traffic	No change		None	None	
Volume of Shallow Draft Traffic	No change		None	None	
Volume of Fishing & Pleasure Craft	No change		None	None	
Traffic Density	No change		None	None	
Navigational Conditions					
Wind Conditions	No change	;	None	None	
Visibility Conditions	No change	,	None	None	
Currents, Tides & Rivers	No change	;	None	None	
Ice Conditions	No change)	None	None	
Long Term Consequences			None	None	
Economic Impacts	No change)	None	None	
Environmental Impacts	No change	e	None	None	
Health & Safety Impacts	No change	e	None	None	

Port Risk Factor	Change in risk factor due to relocation of turning basin	Impact on Safety	Impact Economic	Comment
Waterways Configuration				
Visibility/Obstructions	Visibility in direction of industrial canal is slightly reduced while turning vessel in new location.	Slight increased risk of collision with outbound tug/barge. Deep draft traffic is not impacted.	None	Increased risk easily mitigated by safety broadcast prior to commencing turn in basin.
Passing Arrangements	Number of passing situations significantly reduced as vessels will turn directly off berth and need not ravel down the channel and back again.	Safety is increased as opportunity for collision is reduced	Vessel delays are reduced with fewer passing situations	Relocation of basin reduces both safety risk and negative economic impact due to vessel delays.
Channel & Bottom	Ship channel will be wider in the turning basin.	Safety is increased by additional room in the channel for passing.	Positive impact by reduced dredging costs for turning basin.	Net positive impact
Waterway Complexity	Complexity is reduced, as vessels will not have to cross the channel to turn, and then cross again to make it to the berth.	Safety is increased as number of crossing situations are reduced and basin is further from any terminal	Reduction in vessel delays for channel crossing and quicker turns nets positive economic impact.	Relocation of basin reduces both safety risk and negative economic impact due to vessel delays
Short-Term Consequences				
# of People on Waterway	No change	None	None	
Volume of Petroleum Cargo	No change	None	None	
Volume of HAZCHEM Cargo	No change	None	None	

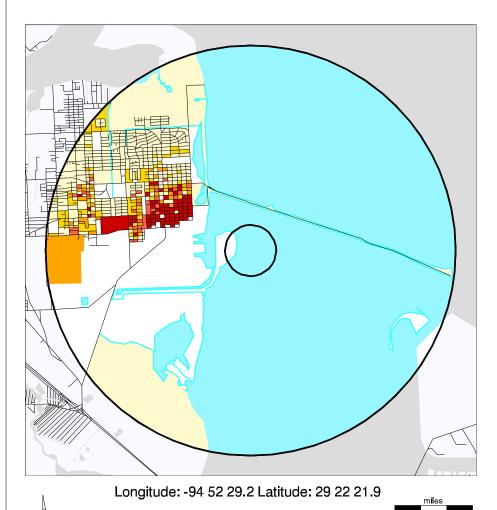
APPENDIX G

EPA ENVIRONMENTAL JUSTICE MAPS: A) MINORITY STATUS DEGREE OF VULNERABILITY; B) ECONOMIC STATUS DEGREE OF VULNERABILITY; C) POTENTIAL ENVIRONMENTAL JUSTICE INDEX

APPENDIX G-1 SHOAL POINT ALTERNATIVE

SHOAL POINT, GALVESTON COUNTY, TX

Minority Status - Degree of Vulnerability (DVMAV)

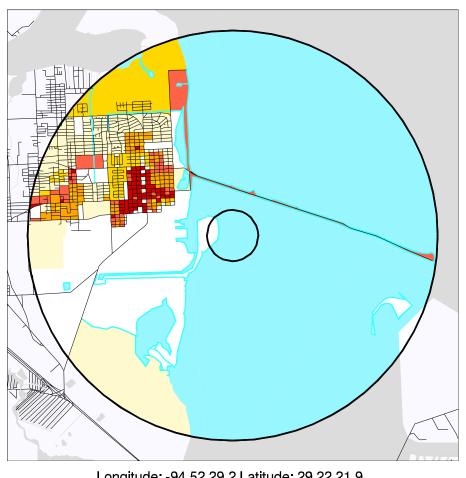


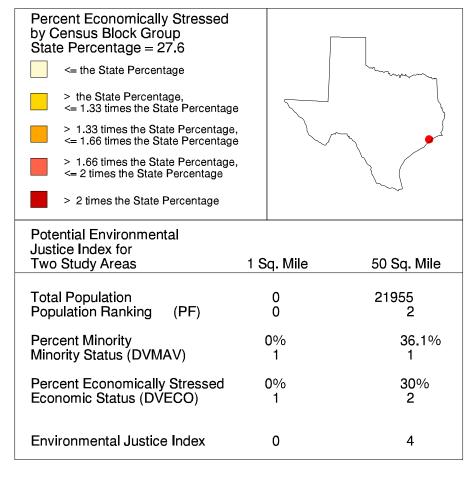
Percent Minority by Census Bloc State Percentage = 39.4	:k	
<= the State Percentage		
> the State Percentage, <= 1.33 times the State Percentage		\
> 1.33 times the State Percentage <= 1.66 times the State Percentage		
> 1.66 times the State Percentage <= 2 times the State Percentage	,	
> 2 times the State Percentage		<u></u>
Potential Environmental Justice Index for		
Two Study Areas	1 Sq. Mile	50 Sq. Mile
Total Population Population Ranking (PF)	0 0	21955 2
Percent Minority Minority Status (DVMAV)	0% 1	36.1% 1
Percent Economically Stressed Economic Status (DVECO)	0% 1	30% 2
Environmental Justice Index	0	4

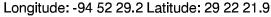


SHOAL POINT, GALVESTON COUNTY, TX

Economic Status - Degree of Vulnerability (DVECO)





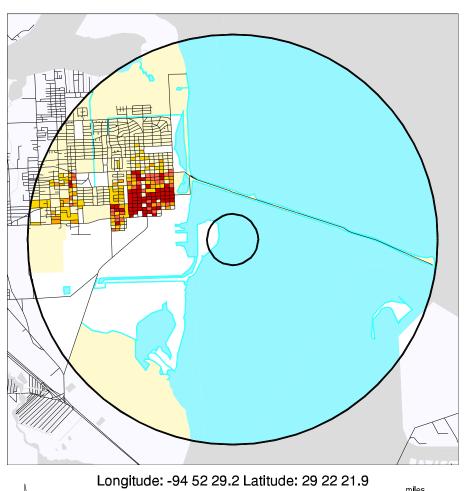


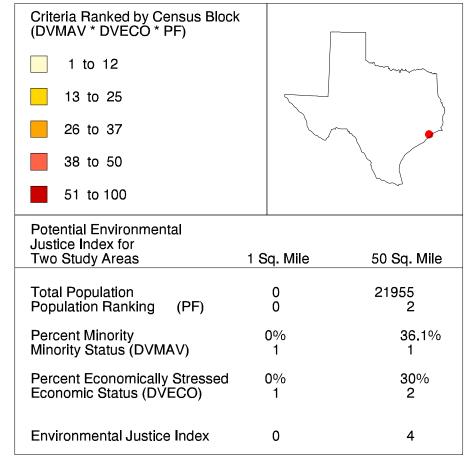


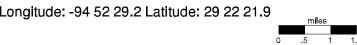


SHOAL POINT, GALVESTON COUNTY, TX

Potential Environmental Justice Index (EJ)





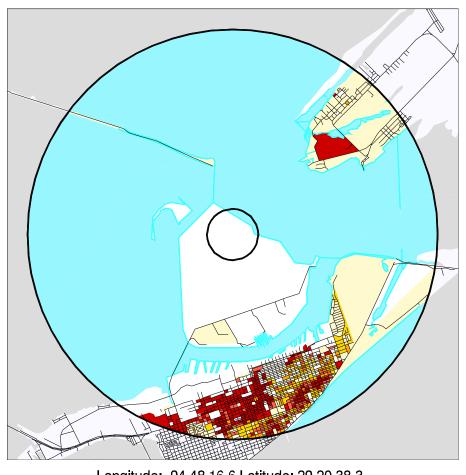




APPENDIX G-2 PELICAN ISLAND ALTERNATIVE

PELICAN ISLAND, GALVESTON COUNTY, TX

Minority Status - Degree of Vulnerability (DVMAV)



Percent Minority by Census Bloc State Percentage = 39.4	;k	
<= the State Percentage		
> the State Percentage, <= 1.33 times the State Percentage		
> 1.33 times the State Percentage <= 1.66 times the State Percentage		
> 1.66 times the State Percentage <= 2 times the State Percentage	,	
> 2 times the State Percentage		~
Potential Environmental Justice Index for		
Two Study Areas	1 Sq. Mile	50 Sq. Mile
Total Population Population Ranking (PF)	0 0	31130 2
Percent Minority Minority Status (DVMAV)	0% 1	64.8% 3
Percent Economically Stressed Economic Status (DVECO)	0% 1	47.6% 4
Environmental Justice Index	0	24

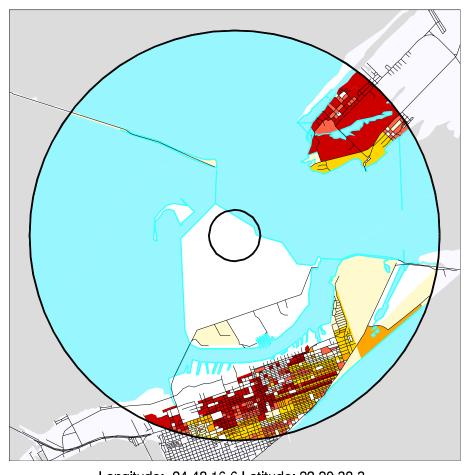
Longitude: -94 48 16.6 Latitude: 29 20 38.3





PELICAN ISLAND, GALVESTON COUNTY, TX

Economic Status - Degree of Vulnerability (DVECO)



Percent Economically Stressed by Census Block Group State Percentage = 27.6		
<= the State Percentage		Mary Mary Mary Mary Mary Mary Mary Mary
> the State Percentage, <= 1.33 times the State Percentage	е	
> 1.33 times the State Percentage <= 1.66 times the State Percentage		
> 1.66 times the State Percentage <= 2 times the State Percentage	,	
> 2 times the State Percentage		~~
Potential Environmental		
Justice Index for Two Study Areas	1 Sq. Mile	50 Sq. Mile
Total Population Population Ranking (PF)	0	31130 2
Percent Minority Minority Status (DVMAV)	0% 1	64.8% 3
willionty Status (B vivi)	'	
Percent Economically Stressed Economic Status (DVECO)	0% 1	47.6% 4

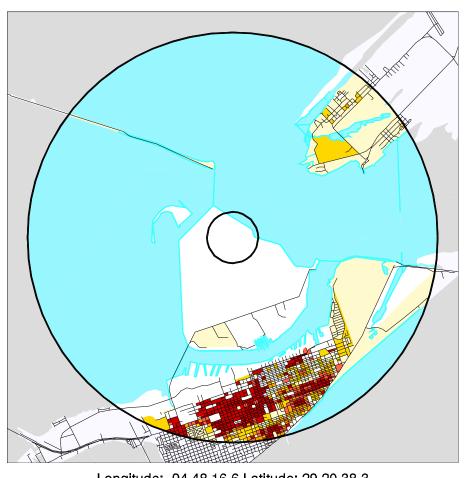
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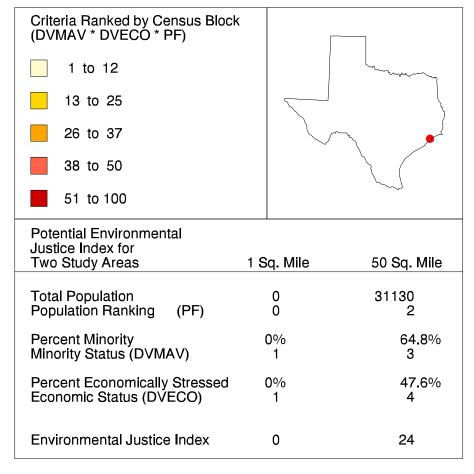


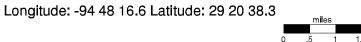


PELICAN ISLAND, GALVESTON COUNTY, TX

Potential Environmental Justice Index (EJ)





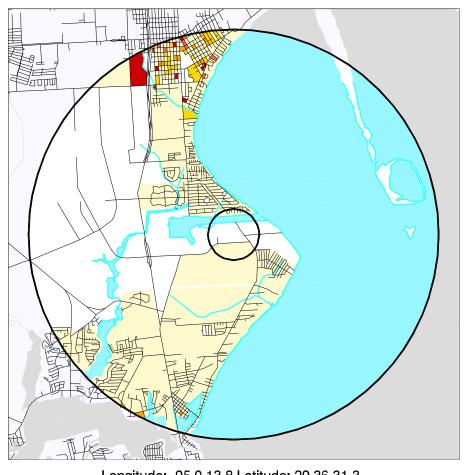


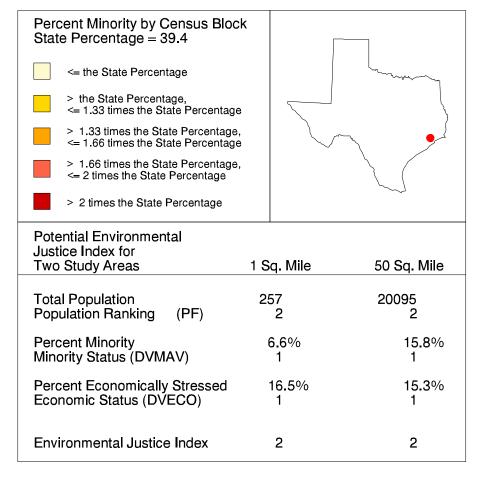


APPENDIX G-3 BAYPORT ALTERNATIVE

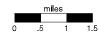
BAYPORT, HARRIS COUNTY, TX

Minority Status - Degree of Vulnerability (DVMAV)





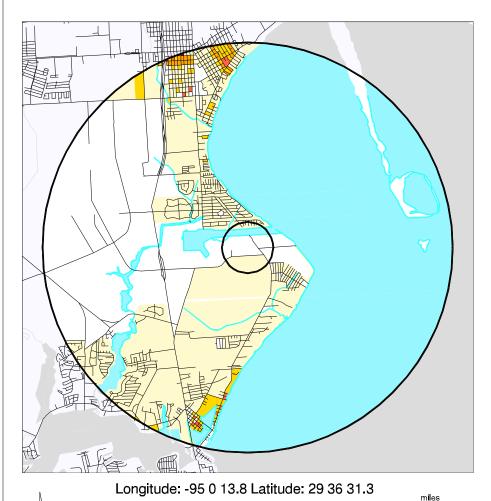
Longitude: -95 0 13.8 Latitude: 29 36 31.3

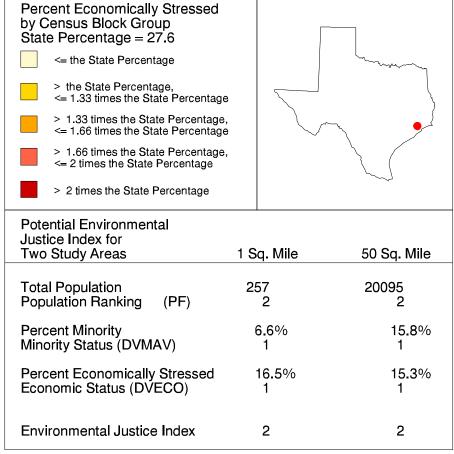




BAYPORT, HARRIS COUNTY, TX

Economic Status - Degree of Vulnerability (DVECO)

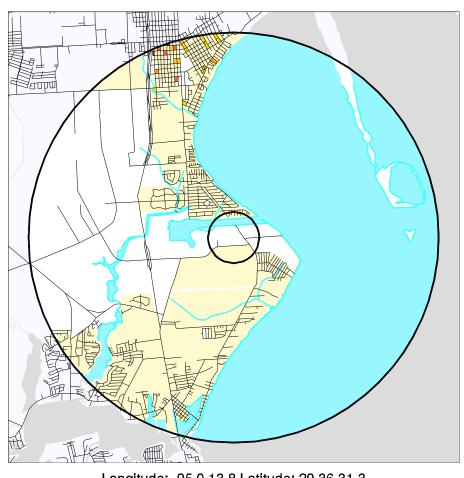


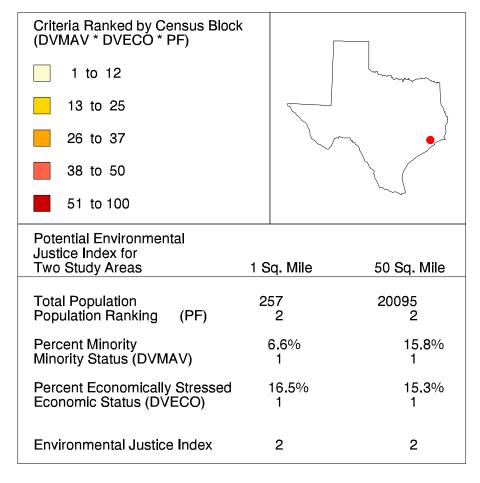




BAYPORT, HARRIS COUNTY, TX

Potential Environmental Justice Index (EJ)





Longitude: -95 0 13.8 Latitude: 29 36 31.3

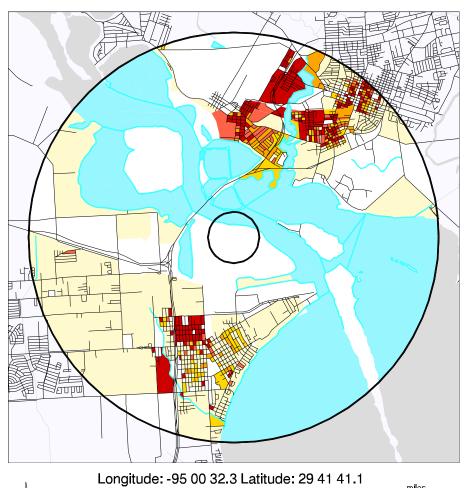




APPENDIX G-4 SPILLMAN'S ISLAND ALTERNATIVE

SPILMAN ISLAND, HARRIS COUNTY, TX

Minority Status - Degree of Vulnerability (DVMAV)



State Percentage = 39.4		
<= the State Percentage		
> the State Percentage, <= 1.33 times the State Percentage		
> 1.33 times the State Percentage, <= 1.66 times the State Percentage		
> 1.66 times the State Percentage, <= 2 times the State Percentage		
> 2 times the State Percentage		
	•	
Potential Environmental		
Potential Environmental Justice Index for Two Study Areas	1 Sq. Mile	50 Sq. Mile
Justice Index for	1 Sq. Mile 0 0	50 Sq. Mile 27631 2
Justice Index for Two Study Areas Total Population		27631
Justice Index for Two Study Areas Total Population Population Ranking (PF) Percent Minority	0	27631 2 51.4%

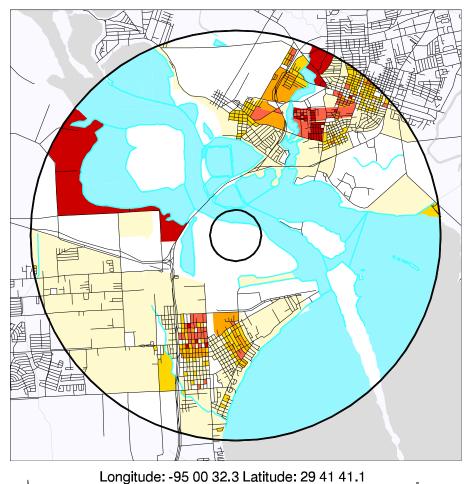
Percent Minority by Census Block





SPILMAN ISLAND, HARRIS COUNTY, TX

Economic Status - Degree of Vulnerability (DVECO)



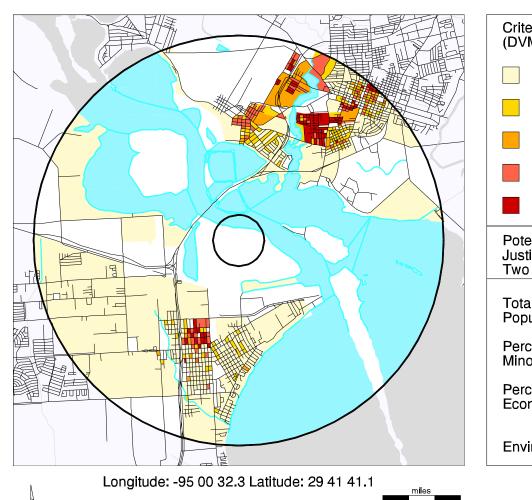
Percent Economically Stressed by Census Block Group State Percentage = 27.6 — <= the State Percentage		
> the State Percentage, <= 1.33 times the State Percentage		\
> 1.33 times the State Percentage <= 1.66 times the State Percentage		
> 1.66 times the State Percentage <= 2 times the State Percentage	,	
> 2 times the State Percentage		~
Potential Environmental Justice Index for	·	
Two Study Areas	1 Sq. Mile	50 Sq. Mile
Total Population Population Ranking (PF)	0	27631 2
Percent Minority Minority Status (DVMAV)	0% 1	51.4% 2
Percent Economically Stressed	0%	28.3%
Economic Status (DVECO)	1	2

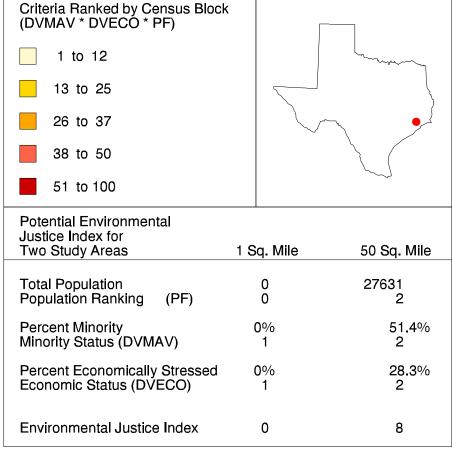




SPILMAN ISLAND, HARRIS COUNTY, TX

Potential Environmental Justice Index (EJ)



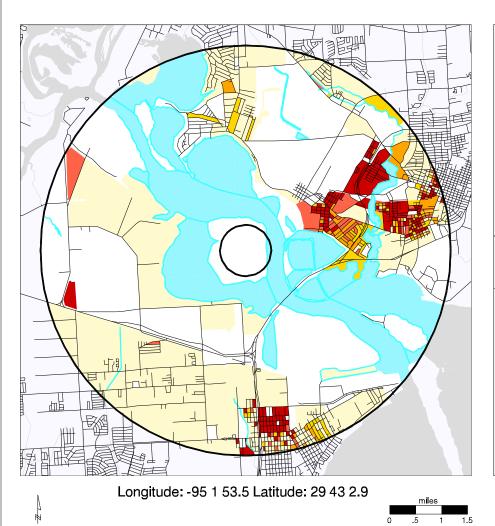




APPENDIX G-5 ALEXANDER ISLAND ALTERNATIVE

ALEXANDER ISLAND, HARRIS COUNTY, TX

Minority Status - Degree of Vulnerability (DVMAV)

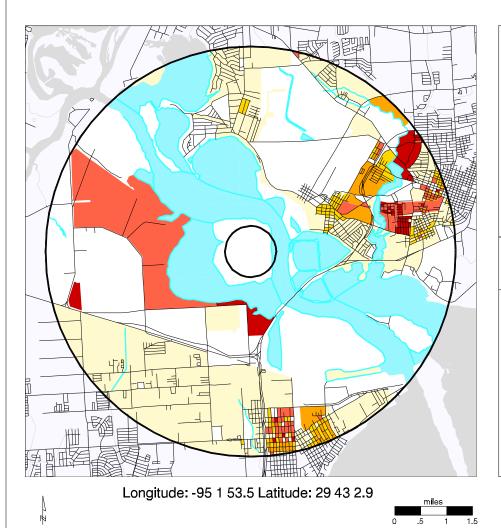


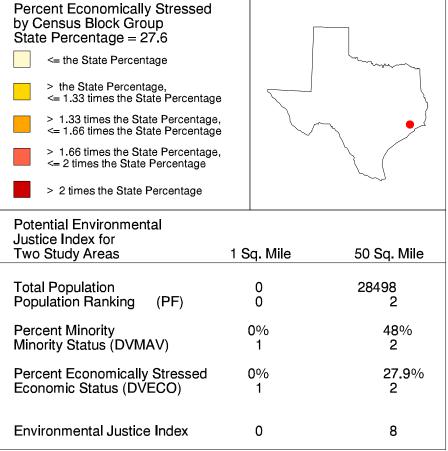
Percent Minority by Census Bloc State Percentage = 39.4	K	
<= the State Percentage		www.
> the State Percentage, <= 1.33 times the State Percentage		
> 1.33 times the State Percentage, <= 1.66 times the State Percentage		•
> 1.66 times the State Percentage, <= 2 times the State Percentage		
> 2 times the State Percentage		~~
	<u> </u>	
Potential Environmental		
Potential Environmental Justice Index for Two Study Areas	1 Sq. Mile	50 Sq. Mile
Justice Index for	1 Sq. Mile 0 0	50 Sq. Mile 28498 2
Justice Index for Two Study Areas Total Population	0	28498
Justice Index for Two Study Areas Total Population Population Ranking (PF) Percent Minority	0 0 0%	28498 2 48%



ALEXANDER ISLAND, HARRIS COUNTY, TX

Economic Status - Degree of Vulnerability (DVECO)

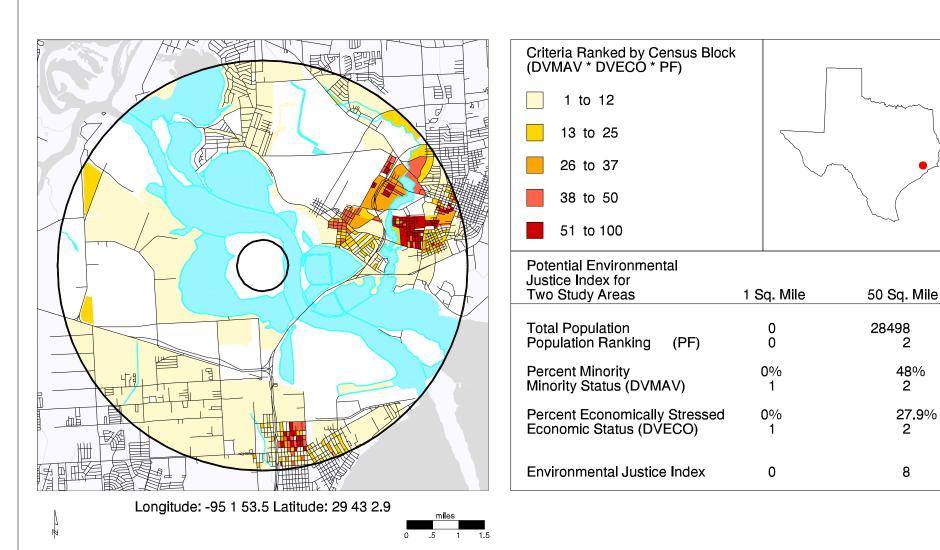






ALEXANDER ISLAND, HARRIS COUNTY, TX

Potential Environmental Justice Index (EJ)

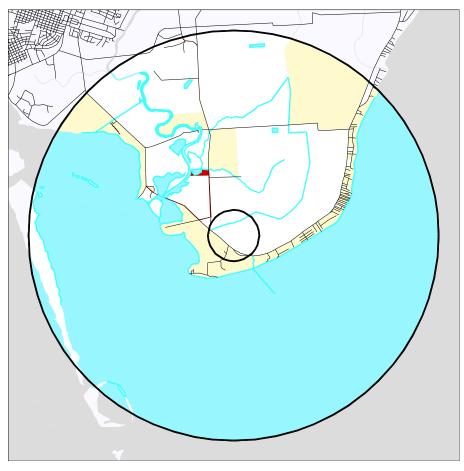




APPENDIX G-6 CEDAR POINT ALTERNATIVE

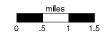
CEDAR POINT, CHAMBERS COUNTY, TX

Minority Status - Degree of Vulnerability (DVMAV)



Percent Minority by Census Bloc State Percentage = 39.4	k	
<= the State Percentage		
> the State Percentage, <= 1.33 times the State Percentage		
> 1.33 times the State Percentage <= 1.66 times the State Percentage		
> 1.66 times the State Percentage <= 2 times the State Percentage		
> 2 times the State Percentage		~~
Potential Environmental Justice Index for		
Potential Environmental Justice Index for Two Study Areas	1 Sq. Mile	50 Sq. Mile
Justice Index for	1 Sq. Mile 9 1	50 Sq. Mile 876 1
Justice Index for Two Study Areas Total Population		·
Justice Index for Two Study Areas Total Population Population Ranking (PF) Percent Minority	9 1 0%	876 1

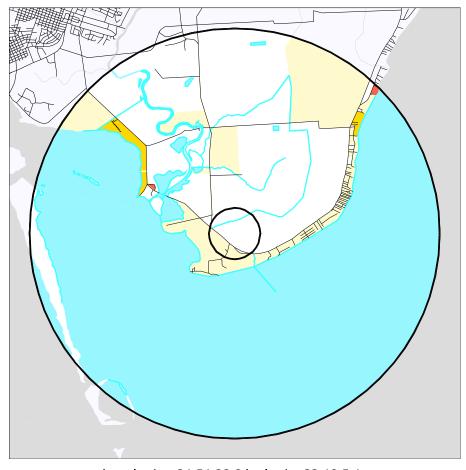
Longitude: -94 54 22.3 Latitude: 29 40 5.4





CEDAR POINT, CHAMBERS COUNTY, TX

Economic Status - Degree of Vulnerability (DVECO)



Percent Economically Stressed by Census Block Group State Percentage = 27.6		
<= the State Percentage		manage and
> the State Percentage, <= 1.33 times the State Percentage		
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Potential Environmental		
Potential Environmental Justice Index for Two Study Areas	1 Sq. Mile	50 Sq. Mile
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Justice Index for Two Study Areas Total Population		·
Justice Index for Two Study Areas Total Population Population Ranking (PF) Percent Minority	9	876 1

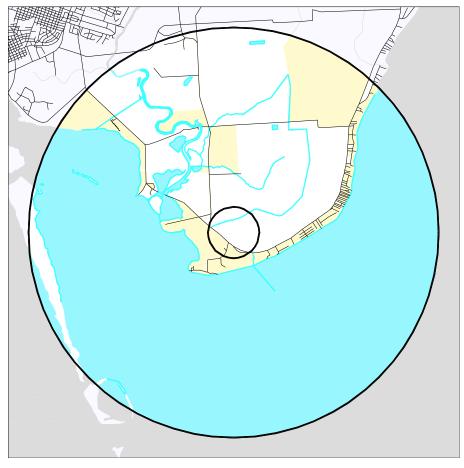
Longitude: -94 54 22.3 Latitude: 29 40 5.4

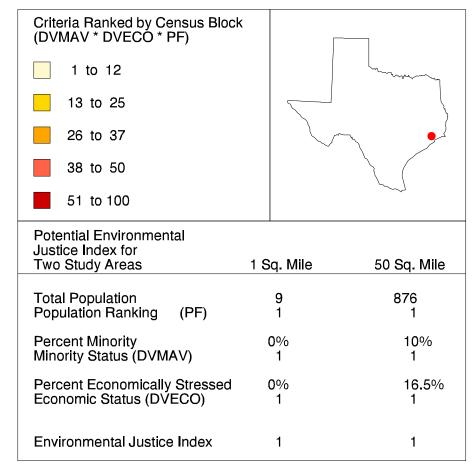




CEDAR POINT, CHAMBERS COUNTY, TX

Potential Environmental Justice Index (EJ)





Longitude: -94 54 22.3 Latitude: 29 40 5.4





APPENDIX H AGENCY COORDINATION

APPENDIX H-1

NOTICE OF INTENT TO PREPARE DRAFT ENVIRONMENTAL IMPACT STATEMENT

Regulations, and applicable laws and regulations. The DEIS will be available to the public in the summer of 2001.

Gregory D. Showalter,

Army Federal Register Liaison Officer. [FR Doc. 00–22223 Filed 8–30–00; 8:45 am] BILLING CODE 3710–CY–P

DEPARTMENT OF DEFENSE

Department of the Army, Corps of Engineers

Intent To Prepare Draft Supplement No. 1 to the Final Environmental Impact Statement [FEIS] for Operation and Maintenance, Arkabutla Lake, Enid Lake, Grenada Lake, and Sardis Lake, Mississippi

AGENCY: U.S. Army Corps of Engineers, Vicksburg District, DOD.

ACTION: Notice of intent.

SUMMARY: The purpose of the proposed action is to evaluate the environmental impacts of the U.S. Army Corps of Engineers proposed continued operation and maintenance activities at Arkabutla Lake, Enid Lake, Grenada Lake, and Sardis Lake, Mississippi.

FOR FURTHER INFORMATION CONTACT: Ms. Ramona Warren (telephone (601) 631–5441), CEMVK–PP–PQ, 4155 Clay Street, Vicksburg, Mississippi 39183–3435

SUPPLEMENTARY INFORMATION: Arkabutla, Enid, Grenada, and Sardis Lakes are part of a comprehensive plan for flood control on the Yazoo River and its tributaries above the head of the Mississippi River backwater area. These lakes are located in north Mississippi in the Bluff Hills and North Central Hills subprovinces section of the Eastern Hills province of the Central Gulf Coastal plain. The four lakes are located from 25 to 100 miles south of Memphis, Tennessee.

Arkabutla Lake is located in Tate and DeSoto Counties, 25 miles south of Memphis and 12 miles northwest of Coldwater, Mississippi. Enid Lake is located in Yalobusha, Panola, and Lafayette Counties, 72 miles south of Memphis and 26 miles north of Grenada, Mississippi. Grenada Lake is located in Grenada, Calhoun, and Yalobusha Counties, 100 miles south of Memphis and 3 miles northeast of Grenada, Mississippi. Sardis Lake is located in parts of Panola, Lafayette, and Marshall Counties, 50 miles south of Memphis and 11 miles northeast of Batesville, Mississippi.

The Flood Control Acts of 15 May 1938 (Public Law (PL) 391, 70th

Congress); 15 May 1928, amended 15 June 1936 (PL-678, 74th Congress); 28 August 1937 (PL-406, 75th Congress); 28 June 1938 (PL-761, 75th Congress); 18 August 1941 (PL-228, 77th Congress); 22 December 1944 (PL-534, 78th Congress); 24 July 1946 (PL-526, 79th Congress); and 27 October 1965 (PL-89-298, 89th Congress) authorized the construction of the Yazoo Headwater Project to control flooding on the four primary tributaries of the Yazoo River. Flood control impoundments were constructed on the Coldwater River (Arkabutla Lake), the Yocona River (Enid Lake), the Yalobusha and Skuna Rivers (Grenada Lake), and the Little Tallahatchie River (Sardis Lake). Also, provisions were included for local stream channel improvements, levee and auxiliary channel construction and appurtenant works as necessary to provide protection from headwater floods of the Yazoo River system.

The Flood Control Act of 1944 authorized the development of recreational facilities at Department of the Army water resource projects. Further provision for the administration of these projects for recreation and fish and wildlife conservation and management was made by three subsequent flood control acts: the Flood Control Act of 1946; the Flood Control Act of 3 September 1954 (PL-780, Title III, Sec. 209, 83d Congress); and the Flood Control Act of 23 October 1962 (PL-87-874), Title II, Sec. 207, 87th Congress). These laws authorized the Government to lease land to private individuals and other government agencies for the development of the recreation and fish and wildlife resources on these projects. They also guaranteed within those limitations established by the Secretary of the Army and the State of Mississippi the public controlled access to shoreline areas for fishing, boating, swimming, and other recreational purposes, and the protection of fish and wildlife resources.

The primary authorized purpose of these lakes is flood control, but many incidental benefits such as navigation, water supply, recreation, fish and wildlife, and timber have been realized. Lands surrounding the lakes are used for public recreation, agricultural production, and conservation of biological resources.

The oldest and largest of the four lakes, Sardis, was begun in June 1937 and completed in October 1940. Construction of Arkabutla Lake was begun in 1940, and the lake was completed in June 1943. Initial construction of Enid Lake began in February 1947, and the lake was completed in December 1952. Grenada

Lake was also begun in February 1947, and was completed in January 1954.

The significant issues tentatively identified for evaluation of the environmental impacts of operation and maintenance activities include (1) impacts of flood control storage, (2) impacts of stream channel maintenance, and (3) impacts to resource management.

The National Environmental Policy Act (40 CFR Part 1501, section 1501.7) requires all Federal agencies prior to preparing an EIS or EIS Supplement to conduct a process termed "scoping." This scoping process determines the issues to be addressed and identifies the significant issues related to a proposed action. To accomplish this, public scoping meetings are tentatively scheduled to be held in Mississippi in September 2000. The Environmental Protection Agency; U.S. Fish and Wildlife Service; Natural Resources Conservation Service; Mississippi Department of Environmental Quality; and Mississippi Department of Wildlife, Fisheries and Parks will be invited to become cooperating agencies. All interested agencies, groups, tribes, and individuals will be sent copies of the Draft Supplemental EIS and FEIS.

The Draft Supplemental EIS is scheduled to be completed in August 2001.

Robert Crear,

Colonel, Corps of Engineers, District Engineer. [FR Doc. 00–22222 Filed 8–30–00; 8:45 am] BILLING CODE 3710–PU–M

DEPARTMENT OF DEFENSE

Department of the Army, Corps of Engineers

Intent To Prepare a Draft
Environmental Impact Statement
(DEIS) for Construction of a
Containerized Cargo Terminal, on
Shoal Point, Adjacent to the Texas City
Channel, Texas City, Galveston
County, TX

AGENCY: U.S. Army Corps of Engineers, Galveston District, DoD.

ACTION: Notice of intent.

SUMMARY: The U.S. Army Corps of Engineers, Galveston District intends to prepare a DEIS to access the social, economic and environmental effects of the proposed multi-phased construction of a container terminal. The DEIS will access potential impacts on a range of alternatives, including the preferred alternative. The Federal action is consideration of a Department of Army Permit application for work under

Section 10 of the Rivers and Harbors Act of 1899 and section 404 of the Clean Water Act.

FOR FURTHER INFORMATION CONTACT: For further information and/or questions about the proposed action and DEIS, please contact Ms. Sharon Manzella Tirpak, Project Manager, by letter at U.S. Army Corps of Engineers, P.O. Box 1229, Galveston, Texas 77553, by telephone at (409) 766–3136, or by email at Sharon.tirpak@usace.army.mil.

SUPPLEMENTARY INFORMATION: The Galveston District intends to prepare a DEIS on the proposed container terminal which would be located on Shoal Point, adjacent to the Texas City Ship Channel, Texas City, Galveston County, Texas. The City of Texas City (Texas City) proposes this project.

- 1. Description of the Proposed Project: Texas City is proposing the construction and operation of a container port facility located on Shoal Point, adjacent to the Texas City Channel and Galveston Bay. The project site is a dredge material disposal area for the Texas City Channel and the Port of Texas City. The Shoal Point project would be built in three phases, ultimately consisting of 400 acres of container yard, six berths, a new turning basin, a land side access corridor and the deepening of the existing Texas City Channel from 40 to 45 feet. An estimated 8 million cubic yards of new dredged material would be generated during Phase I. Potential total build-out of Phases II and III would include an additional 3.2 million cubic vards of new dredged material. Approximately 1.2 acres of emergent marsh, 10.3 acres of high marsh, 3.6 acres of fresh water wetlands and 92.4 acres of open water habitat would be impacted by the proposed project, during Phase I. Potential total build-out of Phases II and III may impact an additional 74 acres of open water habitat.
- 2. Scoping and Public Involvement Process: A scoping meeting to gather information on the subjects to be studied in detail in the DEIS will be conducted on October 3, 2000, at 7:00 PM, at the Charles Doyle Convention Center, 2010 5th Avenue North (21st Street and Phoenix Lane), Texas City, Texas. An informal open house, allowing for review of the proposed project and questions and answers, will be conducted between 5:00 and 7:00 PM, prior to the scoping meeting.
- 3. Significant Issues: Issues associated with the proposed facilities to be given significant analysis in the DEIS are likely to include, but may not be limited to, the potential impacts of the proposed dredging, the beneficial uses of dredged

material, placement of fill, impact of air quality during construction and operation of the facility and surface transportation facilities, and of induced developments on: wetland resources; upland and aquatic biotic communities; water quality, fish and wildlife values including threatened and endangered species; air quality; land forms and geologic resources; community cohesion; environmental justice; roadway traffic; socioeconomic environment; archaeological and cultural resources; recreation and recreational resources; public infrastructure and services; energy supply and natural resources; hazardous waste and materials; land use; aesthetics; public health and safety; navigation; flood plain values; shoreline erosion and accretion; and the needs and welfare of the people.

- 4. Technical Review and Consultation: Several State and Federal Agencies will be invited to provide technical review of the DEIS. Those agencies include: the Environmental Protection Agency, National Marine Fisheries Service, United States Fish and Wildlife Service, the United States Coast Guard, Federal Highways Administration, Texas Natural Resource Conservation Commission, Texas General Land Office and the Texas Department of Transportation.
- 5. Additional Review and Consultation: Additional review and consultation that will be incorporated into the preparation of this DEIS will include: Compliance with the Texas Coastal Management Program; protection of cultural resources under section 106 of the Historic Preservation Act; protection of navigation under the Rivers and Harbors Act of 1899; protection of water quality under section 401 of the Clean Water Act; and protection of endangered and threatened species under section 7 of the Endangered Species Act.
- 6. Availability of the DEIS: The Draft Environmental Impact Statement is projected to be available in September 2001. A Public Hearing will be conducted following the release of the DEIS.

Nicholas J. Buechler,

Col., EN, Commanding. [FR Doc. 00–22219 Filed 8–30–00; 8:45 am] BILLING CODE 3710–52–P

DEPARTMENT OF EDUCATION

Rehabilitation Services Administration

AGENCY: Department of Education.

ACTION: Notice of Final Competitive Preference for Fiscal Year 2001 for the Rehabilitation Long-Term Training and Rehabilitation Continuing Education Programs.

SUMMARY: The Assistant Secretary for the Office of Special Education and Rehabilitative Services announces the additions of competitive preference points to the competitions for the Rehabilitation Long-Term Training and Rehabilitation Continuing Education programs for fiscal year 2001. This notice contains describes the additional competitive preference points.

EFFECTIVE DATE: This priority is effective on October 2, 2000.

FOR FURTHER INFORMATION CONTACT:

Mary C. Lynch, U.S. Department of Education, 400 Maryland Avenue, SW, room 3322, Switzer Building, Washington, DC 20202–2649. Telephone: (202) 205–8291.

If you use a telecommunications device for the deaf (TDD) you may call the Federal Information Relay Service (FIRS) at 1–800–877–8399. Internet: Mary_Lynch@ed.gov. Individuals with disabilities may obtain this document in an alternative format (e.g., Braille, large print, audiotape, or computer diskette) on request to the contact person listed in the preceding paragraph.

SUPPLEMENTARY INFORMATION: This notice announces final competitive preference points under the Rehabilitation Long-Term Training and Rehabilitation Continuing Education programs. These programs are authorized under section 302 of the Rehabilitation Act of 1973, as amended.

On June 30, 2000 the Assistant Secretary published a notice of proposed competitive preference points for these programs in the **Federal Register** (65 FR 40615–40616).

Note: This notice of final competitive preference points does not solicit applications. A notice inviting applications under this competition is published in a separate notice in this issue of the Federal Register.

Analysis of Comments and Changes

In response to the Assistant Secretary's invitation in the notice of proposed competitive preference points, five parties submitted comments. An analysis of the comments and of the changes in the proposed competitive preference points follows. Technical and other minor changes—and suggested changes the Assistant Secretary is not legally authorized to make under the applicable statutory authority—are not addressed.

APPENDIX H-2

USACE LETTER INVITATION FOR OCTOBER 3, 2000, RESOURCES AGENCY WORKSHOP



DEPARTMENT OF THE ARMY GALVESTON DISTRICT, CORPS OF ENGINEERS P.O. BOX 1229

GALVESTON, TEXAS 77553-1229

REPLY TO ATTENTION OF Regulatory Branch

September 6, 2000

(SEE ATTACHED LIST)

Dear

I would like to invite you to a workshop for the Resource Agencies to informally discuss issues you may have concerning the proposed container terminal on Shoal Point, in Texas City. The workshop will be held from 2:00 – 4:00 PM, Tuesday, October 3, 2000, in the Alamo Room of the Nessler Center, in Texas City. The Nessler Center is adjacent to the Charles Doyle Convention Center, where the informal Open House and formal scoping meeting will be held later that evening. PBS&J, the contractor for the preparation of the Draft Environmental Impact Statement, will be present.

Please let me know if you will be able to attend, by calling me at 409-766-3136, or by e-mailing me at Sharon.tirpak@usace.army.mil. I look forward to your participation in this effort. Should you have additional questions, please contact me at the above mentioned phone number.

Sincerely,

Sharon Manzella Tirpak Project Manager

Copy Furnished:

(SEE ATTACHED LIST)

MAIL OUT LIST:

Mr. Carlos Mendoza Ms. Moni Devora United States Fish and Wildlife Service 17629 El Camino Real, Suite 211 Houston, Texas 77058

Mr. Andreas Major Regional Director Southeast Regional Office National Marine Fisheries 9721 Executive Center Drive North Saint Petersburg, Florida 33702-2449

Mr. Rusty Swafford Branch Chief National Marine Fisheries Service Habitat Conservation Division 4700 Ave U Galveston Texas 77551-5997

Mr. Mike Jansky Regional EIS Coordinator Office of Planning & Coordination Environmental Protection Agency 1445 Ross Avenue Dallas, Texas 75202-2733

Mr. Norm Sears Environmental Protection Agency 1445 Ross Avenue, Suite 1200 Dallas, Texas 75202-2733

Mr. Carlos Sanchez Environmental Protection Agency (65F-AP) 1445 Ross Avenue Dallas, Texas 75202-2733

Mr. Ron Gouget NOAA 6H-ma 1445 Ross Avenue Dallas, Texas 75202-2733 Mr. Ken Gathraight
Texas Natural Resource
Conservation Commission
NC-206 P.O. Box 13087
Capitol Station
Austin, Texas 78711-3087

Mr. Jeffery Saitas
Executive Director
Texas Natural Resource
Conservation Commission
MC109 P.O. Box 13087
Capitol Station
Austin, Texas 78711-3087

Ms. Carol Kim
Mr. Richard Siler
Texas Natural Resource
Conservation Commission
142 P.O. Box 13087
Capitol Station
Austin, Texas 78711-3087

Mr. Bill Grimes Texas General Land Office 1700 Congress Ave Austin, Texas 78701-1495

Mr. Gary McMahon Texas General Land Office 11811 North Avenue D La Porte, Texas 77571-9135

Mr. Woody Woodrow Texas Parks & Wildlife Department 17629 El Camino Real Suite 175 Houston Tx 77058-3051

Mr. Don Pitts Texas Parks & Wildlife Departmentt Environmental Branch 4200 Smith School Road Austin, Texas 78744-3291 Mr. Gary Trietsch District Engineer Texas Department of Transportation P.O. Box 1386 Houston, Texas 77251-1386

CDR Richard M. Kaser, P.E. U.S. Coast Guard Marine Safety Unit 611 Rosenberg, Room 309 Galveston, Texas 77550-1705

Mr. F. Lawrence Oaks State Historical Preservation Officer Texas Historical Commission P O Box 12276 Austin, Texas 78711-2276

Mr. C. D. Reagan Division Administrator Federal Highways Administration 300 East 8th Street, Room 826 Austin, Texas 78701

APPENDIX H-3

USACE PUBLIC ANNOUNCEMENT FOR OCTOBER 3, 2000, PUBLIC WORKSHOP AND SCOPING MEETING

01 September 2000

U.S. ARMY CORPS OF ENGINEERS, GALVESTON DISTRICT PUBLIC ANNOUNCEMENT

<u>INTRODUCTION</u>: Notice is hereby given of a public workshop and scoping meeting to be conducted by the Galveston District, Corps of Engineers (Corps), at 5:00 PM on Tuesday, October 3, 2000, at the Charles Doyle Convention Center, 2010 5th Avenue North (21st Street and Phoenix Lane), Texas City, Texas.

BACKGROUND: The Corps is preparing an Environmental Impact Statement (EIS) for the City of Texas City's proposed Shoal Point container terminal. The project is proposed for Shoal Point, a dredge material disposal area, adjacent to the Texas City Channel and Galveston Bay.

Please see the attached "Information Paper" and proposed project plans for additional background on the proposed project.

To address the complex issues associated with the proposed project, we have invited the following Federal and state agencies to provide technical advise during the preparation of the EIS:

- National Marine Fisheries Service
- United State Coast Guard
- United States Fish and Wildlife Service
- Environmental Protection Agency
- Federal Highways Administration
- Texas Natural Resources Conservation Commission
- Texas General Land Office
- Texas Department of Transportation

PURPOSE OF THE WORKSHOP & SCOPING MEETING: An informal open house will be conducted between 5:00 PM and 7:00 PM, prior to the scoping meeting. The open house is to provide basic information to the public on the proposed project and the EIS process. The formal scoping meeting will begin at 7:00 PM and is to help the Corps identify environmental concerns, study efforts needed, and meet the National Environmental Policy Act Requirements for preparing an EIS. Therefore, this meeting is to provide an opportunity for all interested persons to comment and provide information to the Corps for use in identifying problems associated with the project, conducting additional studies, and preparing the EIS. Every effort will be made to address concerns/issues identified in the draft EIS. There will be additional opportunities for the public to express their views in other meetings in the future. Please bring this notice to the attention of others known to be interested in the subject of the meeting.

If you need additional information or have questions concerning this notice, please contact Ms. Sharon Manzella Tirpak at 409-766-3136, or you may write to U. S. Army Corps of Engineers, ATTN: Ms. Sharon Manzella Tirpak, P.O. Box 1229, Galveston, Texas 77553-1229.

CONDUCT OF THE PUBLIC SCOPING MEETING: The District Engineer, Galveston District, Corps of Engineers, will serve as the presiding officer at the public scoping meeting. The District Engineer will take all actions necessary to conduct a fair, impartial, and orderly hearing. To this end, the powers of the District Engineer include, but are not limited to the following:

- (a) To regulate the course of the hearing and conduct of the parties, their counsel, and the public in attendance.
- (b) To establish reasonable time limits for oral statements of parties, their counsel, or representatives.
- (c) To receive into evidence all written statements, charts, tabulations, and similar data.
 - (d) To ask questions of speakers for purposes of clarification.

All persons will be given an opportunity to present oral and written statements, including documentary materials, at the public meeting. Any person will be entitled to be represented by, or speak through, legal counsel or other representative, to call witnesses who may present oral statements, and to present recommendations as to an appropriate study, or other considerations. Prior to the opening of the meeting, each person will be requested to complete an attendance card. The attendance card will contain information blocks on which persons attending the public meeting can give their name, address, and whether they wish to present an oral statement during the public meeting.

Statements and information may be provided without restriction by formal procedures and rules of evidence; however, all statements and information provided must concern the subject matter of the hearing.

All statements shall be addressed to the District Engineer. Cross-examination of any person addressing the public meeting, by any person in attendance, will not be allowed.

The District Engineer or representative will be given the first opportunity to speak and will be allowed the necessary time to complete their oral statement. Other persons intending to address the public meeting will be called upon and should come prepared to complete their oral statement in not more than five minutes (subject to change based on attendance). Statements by any person that cannot be completed within the time allotment should be summarized orally, and the full text submitted in writing.

21979

Written statements or information materials for inclusion in the record, including documentary materials, may be presented during the public meeting or may be mailed to the District Engineer, Galveston District, Corps of Engineers, at the following address:

U.S. ARMY ENGINEER DISTRICT, GALVESTON ATTENTION: CESWG-PE-R P.O. BOX 1229 GALVESTON, TEXAS 77553-1229

All statements, both oral and written, will become part of the official record of the public scoping meeting and will be made available for public examination. Mailed statements to be included in the record must be mailed on or before November 3, 2000.

DISTRICT ENGINEER GALVESTON DISTRICT CORPS OF ENGINEERS

21979 3

Scoping Meeting Date and Location:

Tuesday, October 3, 2000 Open House – 5:00 – 7:00 PM Formal Meeting – 7:00 PM

Charles Doyle Convention Center 2010 5th Avenue North (21st and Phoenix Lane) Texas City, Texas



INFORMATION PAPER PROPOSED SHOAL POINT CONTAINER TERMINAL

In 1998, the City of Texas City initiated several feasibility studies for a container terminal on Shoal Point. The studies encompassed economics, construction suitability, drayage, and environmental concerns. The City owns approximately 340 acres of this dredged material disposal site. The studies concluded that the project appeared feasible. Key features include:

- *Project Need*. Between 4 and 11 new 100-acre, two-berth container terminal equivalents will be needed in the Houston area within the next 25 to 30 years.
- Constructability. Although Shoal Point is a dredged material disposal area and will require special site preparation, the extra cost of site preparation will not compromise the project economics.
- Drayage. Based on current rates, the overland transportation (trucking) costs to Houston area destinations will be competitive with other terminal locations.
- Environmental. Onsite and offsite environmental impacts resulting from construction and operations appear to be minimal. Preliminary discussions with regulatory agencies and environmental groups have not revealed any major problems.

The Shoal Point site possesses several key assets that make it ideal for a major container terminal site, such as:

- Direct landside access on good highway through an undeveloped area to I-45 and two Class I railroads, all within 4.5 miles.
- Excellent water access on the only authorized 50-foot draft project in Texas.
- Compatible land use, since the Shoal Point site is separated from the community by existing
 heavy industry and neither road nor rail traffic would go through residential neighborhoods
 or commercial areas.
- Ideal expansion capability that would allow the project to begin at a modest size and expand to meet future market demand.

After reviewing the project need and feasibility, the City of Texas City established the goal of engaging "A private development partner to build and operate a modern, high-capacity container terminal with private funds, and to provide additional jobs, thereby diversifying the area's economy beyond the existing refining and petrochemical industry".

In February 2000, the City of Texas City issued a request for proposals for potential private development partners. A consortium of Stevedoring Services of America (SSA) and Americana Ships responded, and the City approved a 30-year agreement in April 2000. This agreement includes a six-month due diligence period and a 30-year renewal option. The Stevedoring Services of America/Americana Ships group, which is collectively known as the Texas City International Terminal (TCIT), is a very strong private partner with both expertise and financial

resources. SSA is the largest stevedoring company in North America, operating 40 intermodal terminals. Americana Ships, which is a subsidiary of CP Ships, owns several ocean carriers such as Lykes Bros. and TMM.

The proposed project has the following major features:

- The project would be built in **three phases**. Initial construction would include a 125-acre container yard, berths for two ships, a new turning basin, the landside access corridor, and deepening of the Texas City Channel to 45 feet. Phase II would add 125 acres and two berths, and Phase III another 150 acres and two berths, bringing the total size to 400 acres and six berths.
- The container yard would be built on Shoal Point. Phases I and II would be constructed within disposal Cell C, which is high ground.
- Each berthing area would have a 1000-foot wharf to handle the container cranes, and would be dredged to the same depth as the Texas City Ship Channel.
- A new turning basin would be dredged to alleviate any potential congestion in the existing Texas City Turning Basin.
- The existing Texas City Ship Channel would be deepened to 45 feet from Shoal Point to the Houston Ship Channel; a distance of seven miles. The latter has recently been deepened to 45 feet, thus providing easy deep-draft access to the Gulf.
- The landside access corridor would be routed along an existing 150-foot wide drainage easement. This easement currently contains a 75-foot wide canal that handles discharges from a 450,000-GPM pump station serving as the Texas City hurricane protection system. The access can be built along the drainageway without adversely impacting pump station operations. This route is critical because it avoids any construction through Swan Lake and adjacent wetlands.

A preliminary review of potential environmental concerns has identified three issues that are expected to be of major concern: (a) air quality, including construction and operations; (b) dredged material management, including beneficial uses; and (c) landside transportation. A summary of preliminary information obtained to date regarding these issues follows:

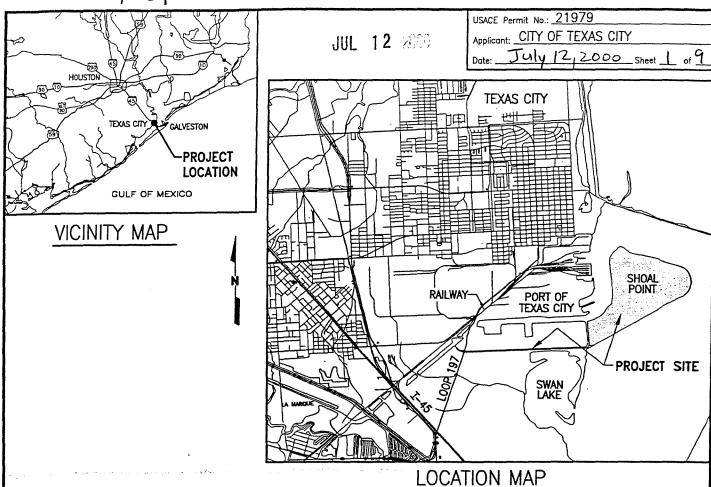
- Air. Since Shoal Point is located in the Houston non-attainment area, the proposed project would be subject to intense scrutiny. The state is now developing its State Implementation Plan (SIP) rules that are scheduled for adoption in December 2000. The draft rules are expected in late July. These will provide guidance on both construction and operational matters. If the project's construction would exceed the threshold of 25 tons/year of NOx, it would be subject to conformity analysis during the USACE permitting process. Work is now underway to develop a plan to minimize emissions and comply with the SIP and other applicable regulations.
- Dredged Material Management. The project construction would generate an estimated total of 11.2 million cubic yards of new dredged material. Of this, an estimated 8 million cubic

yards would be generated in Phase I, since this includes the turning basin and channel deepening as well as two berths. Most of this initial material would be clay, which is good for creation of beneficial use features. A comprehensive dredged material management plan will be required. Such a plan will have to satisfy four primary and potentially competing interests: (a) container terminal project needs; (b) USACE material disposal from the federal project; (c) Port of Texas City disposal from private slips/canals; and (d) environmental concerns including damage to existing resources and construction of new habitat. Work is now underway to develop such a plan. This effort will involve all interested stakeholders including resource agencies, environmental groups, and other bay users as well as the USACE and maritime interests. It is hoped that the beneficial uses experience from the Houston Ship Channel deepening and widening will provide valuable guidance.

Landside Transportation. A primary concern is always the impact that truck and rail traffic going to and from a container terminal would have on residential and commercial neighborhoods. In the case of Shoal Point, the truck impact is expected to be minimal. The total distance from the terminal to I-45 is 4.5 miles; the first three miles would be along a new exclusive-use roadway to the site, and the remaining 1.5 miles would be along Loop 197. The latter is a four-lane highway running through an undevelopable area with wetlands on one side and the hurricane protection levee on the other. In order to get to the existing rail vard, trucks would travel about 0.9 mile. Almost all truck traffic is expected to move along I-45. However, it is anticipated that limited movement of empty trucks up alternate routes to other area terminals to obtain backhaul cargoes would occur. The average volumes are estimated at 640 vehicles per day in each direction for Phase I, increasing to 1,100 vehicles per day in Phase II. The impact on I-45 is expected to be minor - e.g., between Emmett Lowry and NASA Road 1, there would be a 1.1% increase, and between NASA Road 1 and Beltway 8 an increase of 0.8% in total vehicles per day. Rail traffic is expected to increase by 55 and 95 cars per day in each direction for Phase I and Phase II. This low volume would be split between the UP and BN/SF railroads. Also, the limited rail cars would probably be attached to existing trains moving liquid cargoes, thus any vehicle delays for crossing the UP mainline that parallels SH-3 would likely be minimal.

In addition to addressing the issues identified above, the Environmental Impact Statement (EIS) to be prepared for the proposed project will address the direct, indirect, and cumulative impacts of the proposed development on human and environmental issues identified during the public interest review, including onsite and offsite alternatives. All factors that may be relevant to the proposed development will be considered. Among those factors are: conservation, economics, aesthetics, general environmental concerns, wetlands, historic properties, fish and wildlife values, flood hazards, floodplain values, land use, navigation, shore erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food and fiber production, mineral needs, considerations of property ownership, and, in general, the needs and welfare of the people.

Proposed Project Plans

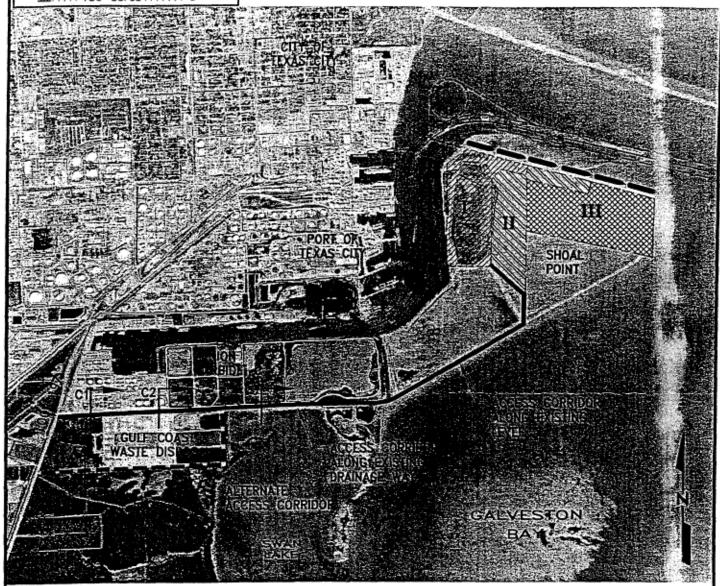


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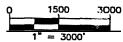
- 1. THE PROJECT PURPOSE IS TO BUILD A MODERN CONTAINER TERMINAL THAT INCLUDES CHANNEL DEEPENING, BERTHS, DOCKS, CONTAINER YARD AND ACCESS CORRIDOR.
- 2.MAJOR ASSETS OF SHOAL POINT ARE: LANDSIDE ACCESS, WATER ACCESS TO GULF, COMPATIBLE LAND USE, MINIMAL ENVIRONMENTAL IMPACTS AND ABILITY TO EXPAND.
- 3. THE ENTIRE PROJECT WILL BE PERMITTED, HOWEVER IT WILL BE BUILT IN THREE PHASES BEGINNING WITH A 125 ACRE TERMINAL AND TWO BERTHS WITH AN ULTIMATE SIZE OF 400 ACRES AND SIX BERTHS.

DATUM: USCE MLT (MEAN LOW TIDE) JOB NO.: 90324 DATE: 6/9/00

REV. 7/7

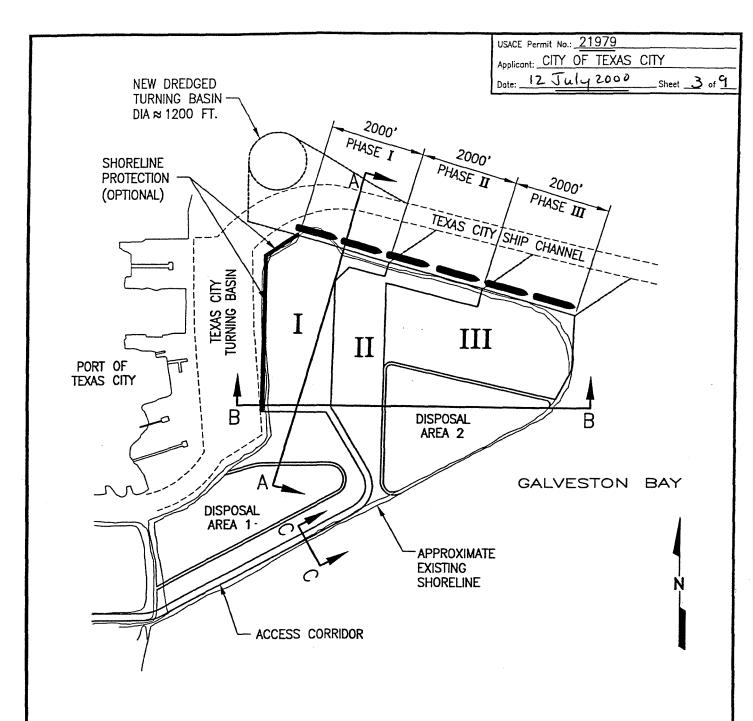


NOTE: FOR SECTIONS C1, C2, C3 AND C4 REFER TO SHEET 5. PROJECT CONCEPT



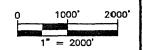
NOTE:

1. ACCESS CORRIDOR PH I TO LOOP 197; PRIMARY = 3.0 MILES ALTERNATE (ADD 1600') = 3.3 MILES



TERMINAL CONCEPT

SEE SHEET C4 FOR SECTIONS AND SHORLEINE PROTECTION



SHINER MOSELEY AND ASSOCIATES, INC. ENGINEERS & CONSULTANTS Corpus Christi/Houston

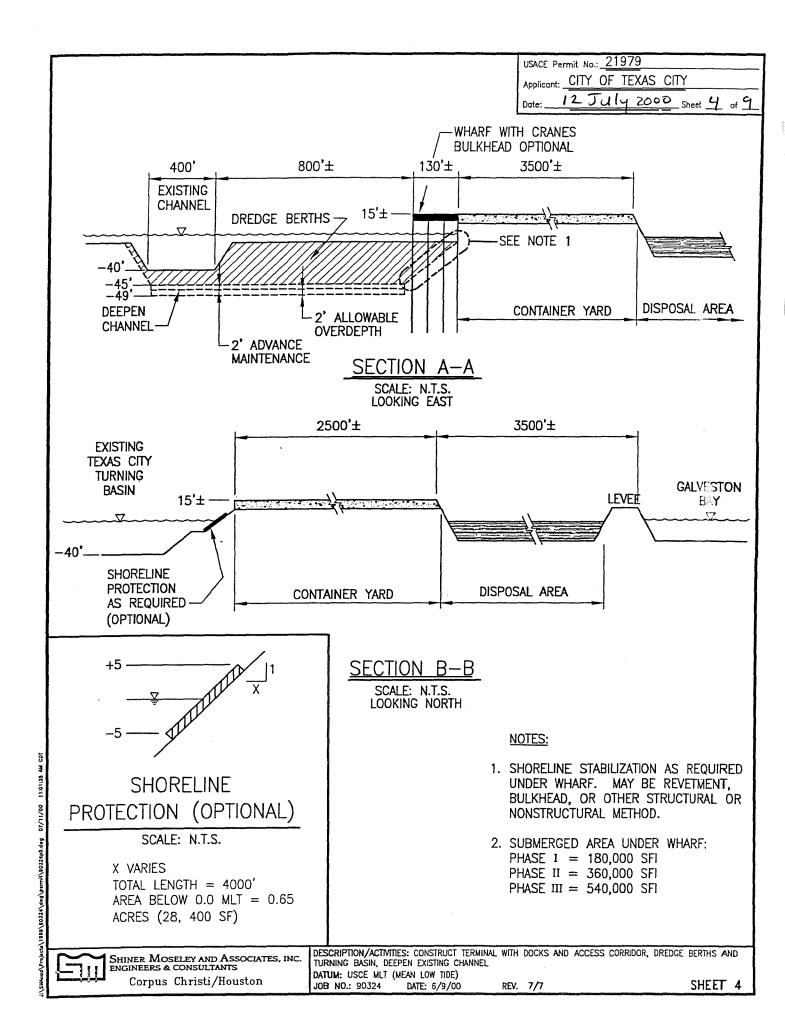
DESCRIPTION/ACTIVITIES: CONSTRUCT TERMINAL WITH DOCKS AND ACCESS CORRIDOR, DREDGE BERTHS AND TURNING BASIN, DEEPEN EXISTING CHANNEL

DATUM: USCE MLT (MEAN LOW TIDE) JOB NO.: 90324

REV. 7/7

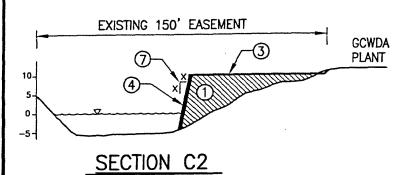
SHEET 3

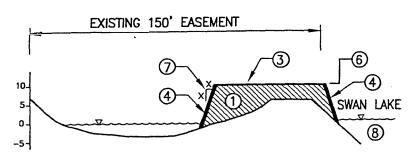
DATE: 6/9/00



EXISTING 150' EASEMENT 10 WETLANDS 0.

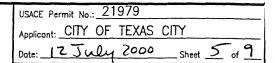
> SECTION C1 BETWEEN LOOP 197 AND GCWDA





EAST OF GCWDA

AT GCWDA PLANT



NOTES:

- FILL WILL BE PLACED ALONG SOUTH SIDE OF DRAINAGE EASEMENT TO CONSTRUCT ACCESS ROAD. ①
- THE EXISTING DRAINAGE WAY IS OFFSET TO THE NORTH SIDE OF THE EASEMENT; CENTERLINE OF DITCH IS APPROXIMATELY 50 FT. FROM EDGE OF EASEMENT.
- 3 FINISHED CORRIDOR WILL HAVE A 60 FT. CROWN WIDTH TO ACCOMMODATE FOUR 12 FT. TRAFFIC LANES, SHOULDERS AND GUARDRAILS.
- SLOPE PROTECTION WILL BE PROVIDED AS APPROPRIATE. THIS MAY INCLUDE REVETMENT, REINFORCED EARTH MODULAR WALL, BULKHEADS, **④** OTHER STRUCTURES OR A COMBINATION THEREOF.
- THE CORRIDOR WILL ACCESS ONLY THE TERMINAL AND WILL BE A PRIVATE ROAD WITH ACCESS CONTROL NEAR
- THE FINISHED ELEVATION WILL BE ABOUT +10 FT. WHICH IS APPROXIMATELY THE HEIGHT OF LOOP 197.
- SLOPE WILL VARY DEPENDING UPON CONSTRUCTION TECHNIQUES AND TYPE OF STABILIZATION USED.
- SOME WETLANDS EXIST ALONG SWAN LAKE OUTSIDE OF R.O.W.
- FOOTPRINT WILL VARY DEPENDING UPON TYPE OF STABILIZATION AND SLOPE PROTECTION USED. 9 ASSUMING A 1:1 SLOPE AND ITS TYPICAL SECTION (C1-C3) THE ESTIMATED TOTAL ACCESS CORRIDOR FOOTPRINT IS 24.8 ACRES.
- ASSUMING A 1:1 SLOPE THE TOTAL AREA OF SHORELINE PROTECTION BELOW 0.0 MLT IS APPROXIMATELY 39,000 SF.

10- 5- 0-	(1) X	<u></u> 3	TX 4	
	SECT	ION C4		

ACCESS CORRIDOR FOOTPRINT			
REACH	LENGTH	TOTAL AREA (AC.)	
DRAINAGEWAY		_	
E. OF GCWDA	4,200'	6.4	
ADJACENT TO GCWDA	3,600'	5.2	
W. OF GCWDA	1,300'	2.1	
SUBTOTAL	9,100'	13.7	
THRU DISPOSAL SITE	6,900'	11.1	
TOTAL	16,000'	24.8	

- 1. WIDTH OF FOOTPRINT VARIES, SEE SECTIONS
 2. ASSUME FINAL ELEVATION OF 10 FT AND 1:1 SLOPE

07/11/00 10:30:52 AM CDI

Projects | 1999 | 90324 | deg | permit | 90324 p6.deg

SHINER MOSELEY AND ASSOCIATES, INC. ENGINEERS & CONSULTANTS

Corpus Christi/Houston

(ALTERNATE)

TURNING BASIN, DEEPEN EXISTING CHANNEL

JOB NO.: 90324

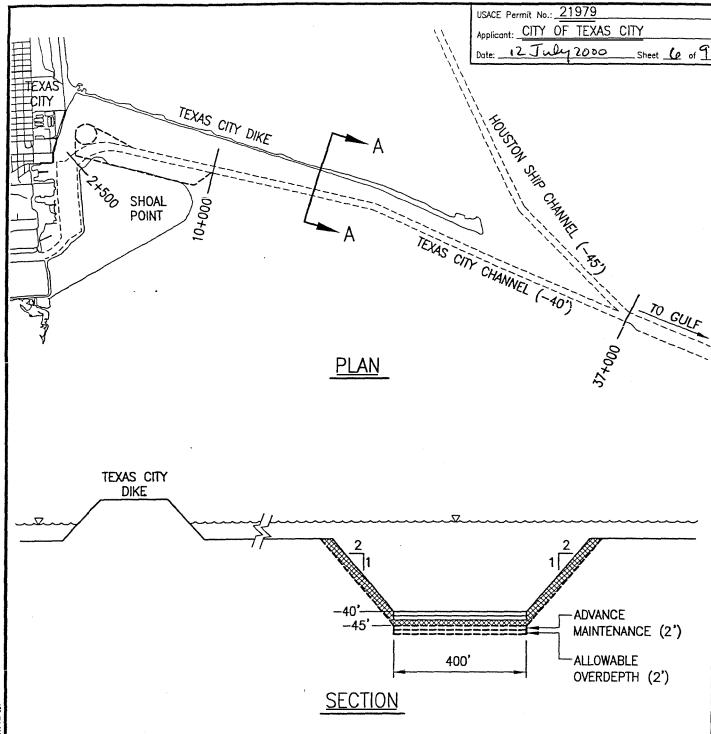
DATE: 6/9/00

SHEET 5

DATUM: USCE MLT (MEAN LOW TIDE)

REV. 7/7

DESCRIPTION/ACTIVITIES: CONSTRUCT TERMINAL WITH DOCKS AND ACCESS CORRIDOR, DREDGE BERTHS AND



NOTES:

- 1. THE EXISTING TEXAS CITY CHANNEL WILL BE DEEPENED FROM 40 FT. TO 45 FT. FROM THE SHOAL POINT TERMINAL SITE TO THE HOUSTON SHIP CHANNEL,
- 2. TO BE CONSISTENT WITH DREDGING PROCEDURES IN FEDERAL CHANNELS THE DEEPENING WILL INCLUDE 2 FT OF ADVANCE MAINTENANCE DREDGING AND 2 FT OF ALLOWABLE OVERDEPTH.
- 3. THE HOUSTON SHIP CHANNEL IS CURRENTLY BEING DEEPENED TO A DEPTH OF 45 FT.
- 4. THE CURRENT BOTTOM WIDTH OF 400 FT. WILL BE MAINTAINED.



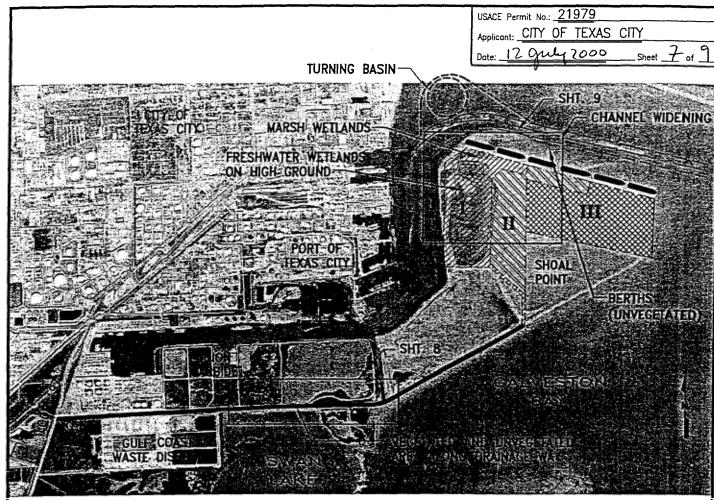
SHINER MOSELEY AND ASSOCIATES, INC. ENGINEERS & CONSULTANTS

Corpus Christi/Houston

DESCRIPTION/ACTIVITIES: CONSTRUCT TERMINAL WITH DOCKS AND ACCESS CORRIDOR, DREDGE BERTHS AND TURNING BASIN, DEEPEN EXISTING CHANNEL

DATUM: USCE MLT (MEAN LOW TIDE)

JOB NO.: 90324 DATE: 6/9/00 REV. 7/7



WETLAND IMPACT SUMMARY

P		15	00	3000
	1-	-	3000°	

COMPONENTS AND HABITAT	PHASE I	PHASE II	PHASE III	TOTAL
ACCESS CORRIDOR				
SPARTINA	0.3			0.3
SUBMERGED-UNVEG.	2.2	N/A	N/A	2.2
TOTAL JURISD.	2.5			2.5
CONTAINER YARD AND BERTH AREA				
SPARTINA	0.9	0	0	0.9
SUBMERGED-UNVEG.	37	37	37	111
MARSH-HI/LO	10.3	0	0	10.3
FRESHWATER-WETLAND	3.6	TBD	TBD	3.6(+TBD)
TOTAL JURISD.	51.8			
TURNING BASIN				
SPARTINA	D			
SUBMERGED-UNVEG.	46.9	N/A	N/A	46.9
TOTAL JURISD.	46.9			46.9
CHANNEL.				
SPARTINA	0			
SUBMERGED-UNVEG.	6.3	N/A	N/A	6.3
TOTAL JURISD.	6.3			6.3
SUMMARY				
SPARTINA	1.2	0	0	1.2
SUBMERGED-UNVEG.	92.4	37	37	166.4
MARSH-HI/LO	10.3	0	0	10.3
FRESHWATER-WETLAND	3.6	TBD	TBD	3.6(+TBD)
TOTAL JURISD.	107.5	37(+TBD)	37(+TBD)	181.5(+TBD)

NOTE:

NO JURISDICTIONAL DETERMINATION HAS BEEN DONE FOR PHASE II AND III. THIS WILL BE DONE 1-YEAR PRIOR TO CONSTRUCTION IN THOSE AREAS AND APPROPRIATE MITIGATION NEEDS DETERMINED. DOING DELINEATION NOW WOULD NOT PROVIDE USEFUL INFORMATION SINCE THESE ARE ACTIVE DISPOSAL CELLS THAT WILL BE USED BEFORE PHASE II AND III ARE BUILT.

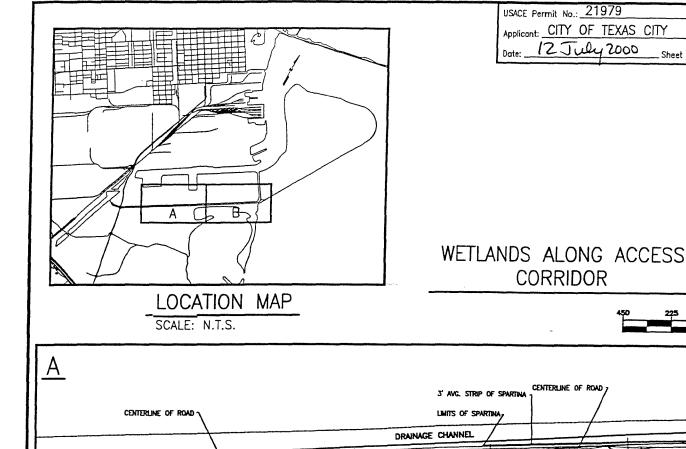
SHINER MOSELEY AND ASSOCIATES, INC. ENGINEERS & CONSULTANTS

Corpus Christi/Houston

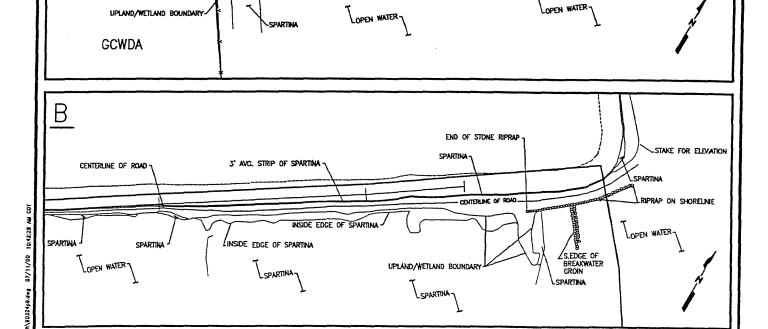
DESCRIPTION/ACTIVITIES: CONSTRUCT TERMINAL WITH DOCKS AND ACCESS CORRIDOR, DREDGE BERTHS AND TURNING BASIN, DEEPEN EXISTING CHANNEL

DATUM: USCE MLT (MEAN LOW TIDE) JOB NO.: 90324 DATE: 6/9/00

REV. 6/26/00



SPARTINA
UPLAND/WETLAND BOUNDARY



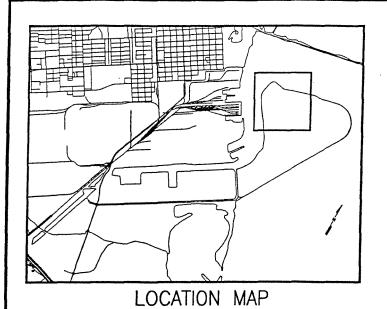


Shiner Moseley and Associates, inc. engineers & consultants Corpus Christi/Houston DESCRIPTION/ACTIVITIES: CONSTRUCT TERMINAL WITH DOCKS AND ACCESS CORRIDOR, DREDGE BERTHS AND TURNING BASIN, DEEPEN EXISTING CHANNEL

UPLAND/WETLAND BOUNDARY

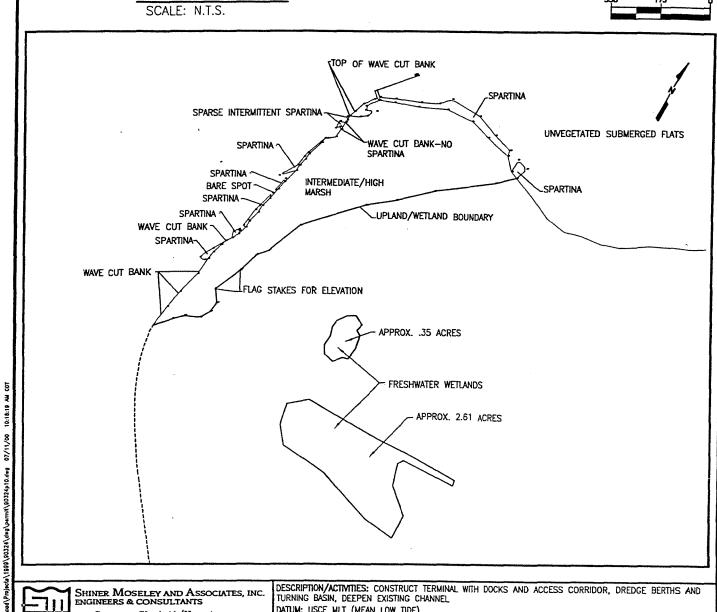
DATUM: USCE MLT (MEAN LOW TIDE) JOB NO.: 90324 DATE: 6/9/00

REV. 7/7



USACE Permit No.: 21979 Applicant: CITY OF TEXAS CITY Date: 12 July 2000

SHOAL POINT WETLANDS WITHIN PHASE I





SHINER MOSELEY AND ASSOCIATES, INC. ENGINEERS & CONSULTANTS Corpus Christi/Houston

DESCRIPTION/ACTIVITIES: CONSTRUCT TERMINAL WITH DOCKS AND ACCESS CORRIDOR, DREDGE BERTHS AND TURNING BASIN, DEEPEN EXISTING CHANNEL

DATUM: USCE MLT (MEAN LOW TIDE) JOB NO.: 90324 DATE: 6/9/00

REV. 7/7



US Army Engineer District, Galveston PO Box 1229 Galveston, Texas 77553-1229

OFFICIAL BUSINESS CESWG-PE-R

FIRST CLASS MAIL
PAID
Galveston, TX
Permit No. 248

APPENDIX H-4

LETTER INVITATION FOR FEBRUARY 27, 2001, GALVESTON BAY STAKEHOLDER'S MEETING

FIELD(1)

PBS&J Job No. 440622

RE:

Galveston Bay Stakeholders Meeting - Potential Beneficial Uses of Dredge Material from Shoal Point Container Terminal Project

Dear FIELD(2):

As a representative of one of the important stakeholder groups in the Galveston Bay estuary, we would appreciate your contribution, suggestions and concerns, to the Dredge Material Management Plan currently being developed for the proposed Texas City International Terminal, also known as the Shoal Point Container Terminal. The Dredge Material Management Plan will be part of the Environmental Impact Statement for the proposed project. This meeting is designed to gather suggestions, information and concerns from all the Bay's stakeholder groups that might have an interest in the potential Beneficial Uses of the dredge material that will be produced if the Shoal Point Container Terminal is built.

Please find enclosed an information packet including a map and descriptions of possible Beneficial Use projects that have been identified so far. They include Swan Lake marsh restoration, expansion/reinforcement of the Texas City Dike, Skyline Drive shoreline protection (combined marsh creation/recreational use with public access and boat launch), Pelican Island marsh creation, and marsh creation south of Shoal Point.

The meeting will be held at the Charles T. Doyle Convention Center in Texas City (21st St. at Phoenix Lane) on February 27, 2001 (Tuesday) from 6:30 to 8:30 p.m. We hope you can attend or send a representative to this meeting. It is our desire to get as much input as possible from the Bay stakeholders on exactly what they'd like to see done with the dredge material.

Regards,

Kathy Calnan

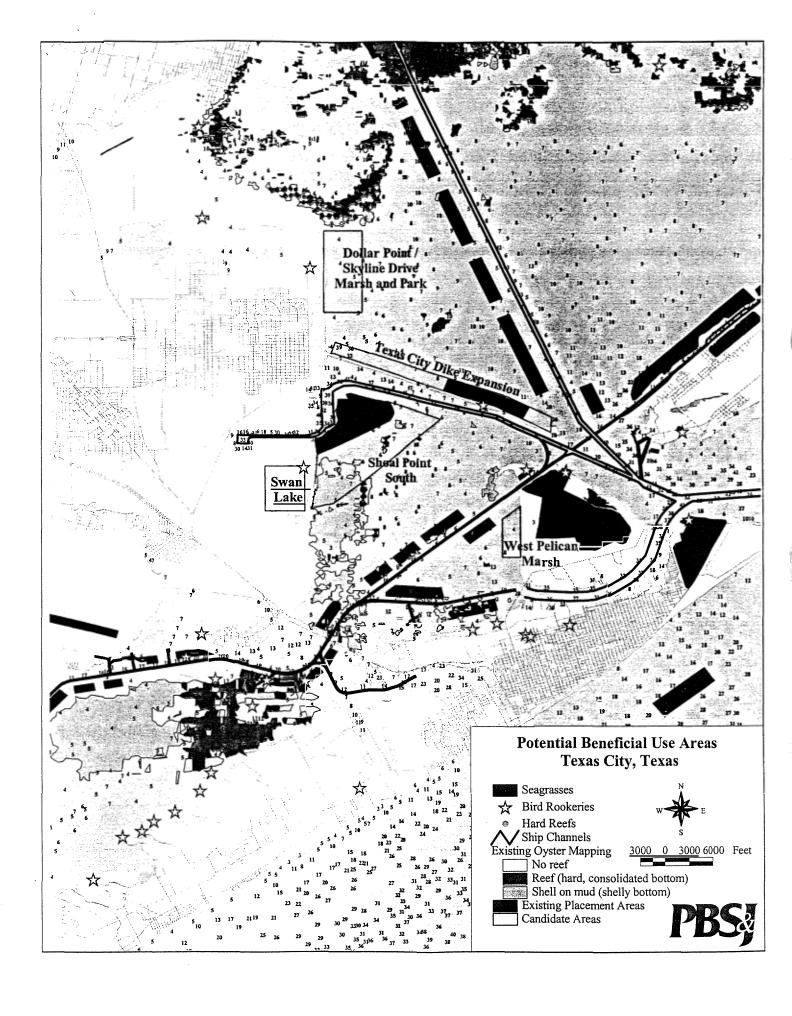
Cc:

Cecilia Green (PBS&J) Paul Jensen (PBS&J) Sharon Tirpak (USACE)

Doug Hoover (City of Texas City)

Gene Smith (TCIT)

Enclosure



Beneficial Uses of Dredged Materials from the Proposed Shoal Point Container Terminal

Dredging Operations associated with the construction and maintenance of the proposed Shoal Point Container Terminal are predicted to produce approximately 30 million cubic yards of dredged material over a 50 year period. This material, formerly thought of as spoil, is now recognized as a valuable resource.

A working group, led by Paul Jensen of PBS&J, was formed to advise the EIS project team in the development of a Dredged Material Management Plan for the proposed project. Workgroup members include representatives for:

- The City of Texas City and the Texas City International Terminal (TCIT) project team including Americana Ships, Stevedoring Services of America, Berger/ABAM Engineering, and Shiner Moseley and Associates
- State and federal agencies including U.S. Army Corps of Engineers, Texas Natural Resource Conservation Commission, Texas General Land Office, National Marine Fisheries Service, National Oceanic and Atmospheric Administration, Texas Parks and Wildlife Department, the U.S. Environmental Protection Agency, and the U.S. Fish and Wildlife Service
- Texas Audubon Society

The loss of over 30,000 acres of marsh habitat in the Galveston Bay estuary since 1950 have made marsh restoration/creation a priority. This is reflected in the high proportion of proposed projects that restore of create marsh. The attached map shows the general locations for several possible projects that could use the dredge material. These include:

Shoreline along Skyline Drive, South of Dollar Point

This project would combine marsh creation with a recreational park component. It would be located adjacent to the armored shoreline along Skyline Drive, south of Dollar Point. An outer levee with gaps for tidal circulation would be constructed and filled to the elevation required for marsh creation. Some part of the feature would be filled to upland elevation and include recreational features such as a boat ramp and possibly parking. The outer levee could be a footpath with education signage (wildlife habitat), benches, picnic tables, etc. The site would be constructed in the first round (i.e., use construction, not maintenance material).

West Pelican Island

Marsh creation/restoration on west side of island. The site would be constructed in the first round (i.e., use construction, not maintenance material).

Expansion of northern side of Texas City Dike

This project could create beach, sand flats and/or marsh by the placement of dredged material on northern side of dike to expand its width to 100 feet or more. This proposal also includes material placed at the end of the dike to alleviate the erosion problem.

Swan Lake

Restore marsh (over 300 acres) lost to historical subsidence. It would also need to address the current erosion problem caused by the break up of the natural wavebreak without endangering bird islands. This would involve working with the TNRCC project which will build part of wavebreak and create 93 acres of marsh.

Shoal Point (and area between Shoal Point and Swan Lake)

The attached map shows a large area under consideration. Potential projects for this site vary in size, shape, configuration, use and other factors. These include:

- Marsh creation by building leveed cells to act as dredged material placement areas. These cells would eventually be filled to elevations suitable for marsh creation, at which point they would be decommissioned and reshaped to create marsh. This would be a long-term project, using much of the maintenance material.
- These cells could be adjacent to or near Shoal Point and/or Swan Lake. Placement location and other design
 measures would be considered to ensure proper circulation and other requirements for a functioning marsh.
 Care would also be taken to avoid negative impacts to Swan Lake marshes. A potential benefit to Swan Lake
 would be additional wave protection. Impacts to oysters and other bay habitat would also need to be
 considered.
- The placement of these cells could also be selected to leave part of Shoal Point open for future potential commercial uses (not including the proposed Container Port).

Galveston Bay Area Users / Stakeholders Groups

Name	Affiliation	
John Bartos	Houston Canoe Club	
Dr. Donald Bass	College of the Mainland	
Linda Shead, P.E.	Galveston Bay Foundation (GBF)	
Dr. David and Winnie Burkett	Houston Audubon Society (HAS)	
George Regmund	Armand Bayou Nature Center	
Commodore George Perdue	Houston Yacht Club	
Joan Cordes	Lakewood Yacht Club	
Eugene Scott**	Galveston Yacht Club	
J.B. (Bill) Mathis	Port of Texas City	
	Rusty Hook Club - Texas City**	
	Texas Shrimp Association (TSA)***	
Brandon Rizzo**	Bay Area Personal Watercraft Association	
Carl Bohannon*	Hobie Cat Club	
Doug Hughs***	Hobie Cat Club	
Charlie Gioielli*	Windsurfer/Kite-sailers' Club	
Guy Jackson (or Ben Nelson)	Coastal Oyster Lease Assoc. (COLA)	
	Fishing Guide Association***	
Gene Campbell	Chandeleur Island Charters	
George Carter	BP Amoco	
Ted Caryl	Texas Whaler Owners Club	
Helen Drummond	Galveston Bay Estuary Program	
Bob Gallaway		
	League of Women Voters - Bay Area / Houston	
Charles Herbeck	Mabry, Herbeck & Chilton, L.L.P.	
Clifford Hillman	Hillman Shrimp & Oyster Co.	
Diane Schenke	The Nature Conservancy of Texas (TNCT)	
Sarah Ann Lee	Bayou Preservation Association (BPA)	
Verne Lehmberg	Texas Fly Fishers Association (TFFA)	
Dr. James Lester	University of Houston, Clear Lake (UH-CL)	
Julie Massey	Galveston County Marine Extension	
Dr. William Merrell	Texas A&M University / Galveston	
Dorris Nelson	Fisherman's Harvest Inc.	
Dr. Sammy Ray	Texas A&M Galveston	
Sharron Schmalz	Wildlife Rehab & Education	
C.L. Standley	PISCES	
Ellen Ann Stephenson	Citizens' Environmental Colition	
Dr. Robert Stickney	Sea Grant College Program	
	Texas A&M University	
John E. Walker	Ducks Unlimited	
Dr. Jim Webb	Texas A&M University / Galveston	
Lalise Whorton Mason	Scenic Galveston	
Page Williams	Houston Sierra Club	
Jerry Wooster	Saltwater Anglers League of Texas (SALT)	
Ms. M.E. Cook*	University of Texas Real Estate	
Dan Wyatt	Texas Mariners Cruising Association	
Laurie Adcox	National Association of Conservation Districts	
The Honorable Peter Alfaro	City of Baytown	
Jim Blackburn	Galveston Bay Conservation & Preservation Association	

Frank Blake	Sierra Club HRG Executive Committee Chair
Kevin Daniels	Coastal Conservation Association of Texas
Connie Elston	Bay Area Transportation Partnership
David Foulkrod	Boating Trades Association
Jim Kachtick	Greater Houston Partnership
John Massey	Bay Area Transportation Partnership BYL International, Inc.
Joe Nelson	Texas Oyster Growers and Dealers Association
The Honorable Roger Quiroga,	Mayor, City of Galveston
Philip Randolph	Omega Bay Improvement Comm
Lori Roussel	Gulf Coaswt Waste Disposal Authority
Mary Starr	Bay Area Board of Realtors
James Suber	Seashore Community Advisory Panel
Ted Thorjussen	West Gulf Maritime Association
John E. Walker	Ducks Unlimited
Mary Ellen Whitworth	Bayou Preservation Association

All of the above were invited by mail (mailed February 16, 2001), except those noted by asterisk, which were contacted as noted as soon as we got the contact information

^{*} Invited via telephone call/email/fax

** Left phone message

^{***} No contact

APPENDIX H-5

USACE PUBLIC ANNOUNCEMENT FOR APRIL 24, 2001, PUBLIC WORKSHOP



March 24, 2001

U.S. Army Corps of Engineers, Galveston District

INTRODUCTION: Notice is hereby given of a public workshop to be conducted by the Galveston District, Corps of Engineers (Corps), between 5:00 and 8:00 PM on Tuesday, April 24, 2001, at the Charles Doyle Convention Center, 2010 5th Avenue North (21st Street and Phoenix Lane), Texas City, Texas.

BACKGROUND: The consulting firm PBS&J, under the direction of the Corps, is preparing an Environmental Impact Statement (EIS) for the City of Texas City's proposed Shoal Point container terminal. The project is proposed for Shoal Point, a dredge material disposal area, adjacent to the Texas City Channel and Galveston Bay. Since the October 2000 Scoping Meeting, inter-agency work groups were formed to study the main issues related to the proposed terminal. Groups were formed to study issues related to air quality, land-based and marine traffic, dredge material management and alternative site locations. The following Federal, state and local agencies are involved in the workgroups:

- National Marine Fisheries Service
- United States Coast Guard
- United States Fish and Wildlife Service
- Environmental Protection Agency
- Federal Highways Administration
- Texas Parks and Wildlife Department
- Texas Natural Resource Conservation Commission
- Texas General Land Office
- Texas Department of Transportation
- Galveston County Health Department
- Houston-Galveston Area Council (HGAC)
- Galveston-Texas City Pilots
- Port of Texas City
- City of Texas City

In addition to the issues being studied by the work groups, information on the following topics is also being gathered: geology, topography, hydrology, hazardous material site assessment, surface and groundwater quality, wetlands, terrestrial wildlife, aquatic ecology, endangered species, cultural resources, land uses, aesthetics and socioeconomics. Attached are a map to the convention center, the proposed project plans and a brief description of the information gathered to date.

<u>PURPOSE OF THE WORKSHOP</u>: This workshop is not a requirement under the National Environmental Policy Act (NEPA) for the EIS process. It is to provide an

update to the public on the proposed project and the EIS process. The workshop will provide the opportunity for the public to view up-to-date project information and to discuss the information with the EIS project team. In addition, the workshop will provide an opportunity for all interested persons to provide written comments to the Corps for use in preparation of the Draft EIS. Please bring this notice to the attention of others known to be interested in the subject of the meeting.

<u>CONDUCT OF THE WORKSHOP</u>: The workshop will be conducted informally in an "Open House" style. Displays will be available for viewing project information, with project team members available for questions or discussion. <u>Written statements only</u> will be accepted as official comments at this forum and for 30 days following the date of the workshop.

All written comments will become part of the official record of the public workshop and will be made available for public examination. Mailed statements to be included in the record must be received by May 24, 2001.

If mailing comments please send to the District Engineer, Galveston District, Corps of Engineers, at the following address:

U.S. ARMY ENGINEET DISTRICT, GALVESTON ATTENTION: CESWG-PE-R P.O. BOX 1229 GALVESTON, TEXAS 77553-1229

If you need additional information or have questions concerning this notice, please contact Ms. Sharon Manzella Tirpak at 409-766-3136, by e-mail at Sharon.tirpak@usace.army.mil or you may write to U. S. Army Corps of Engineers, ATTN: Ms. Sharon Manzella Tirpak, P.O. Box 1229, Galveston, Texas 77553-1229.

DISTRICT ENGINEER
GALVESTON DISTRICT
CORPS OF ENGINEERS

Informal Public Workshop Shoal Point Container Terminal EIS

Date:

Tuesday, April 24, 2001

Time:

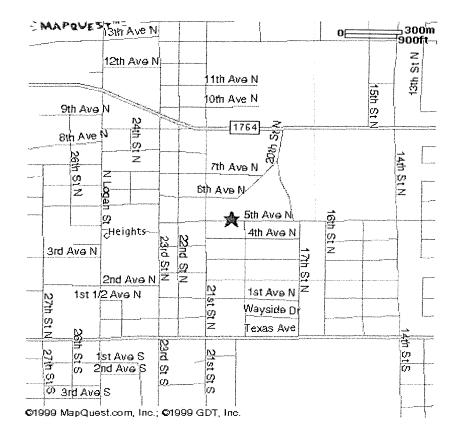
5:00 - 8:00 PM

Place:

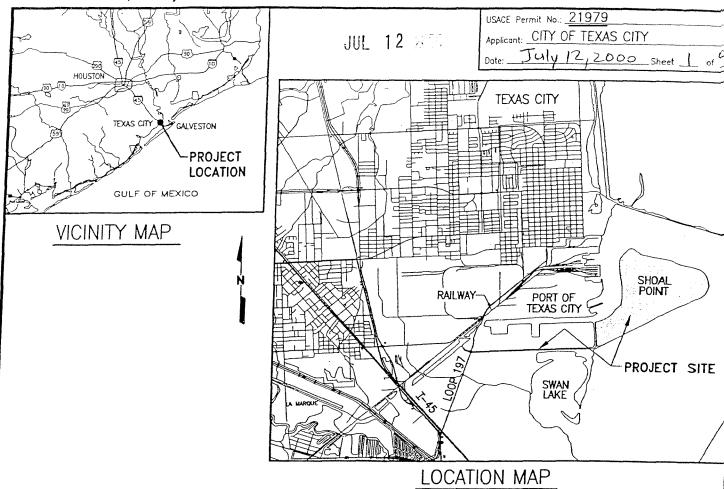
Charles Doyle Convention Center

2010 5th Avenue North (21st and Phoenix Lane)

Texas City, Texas



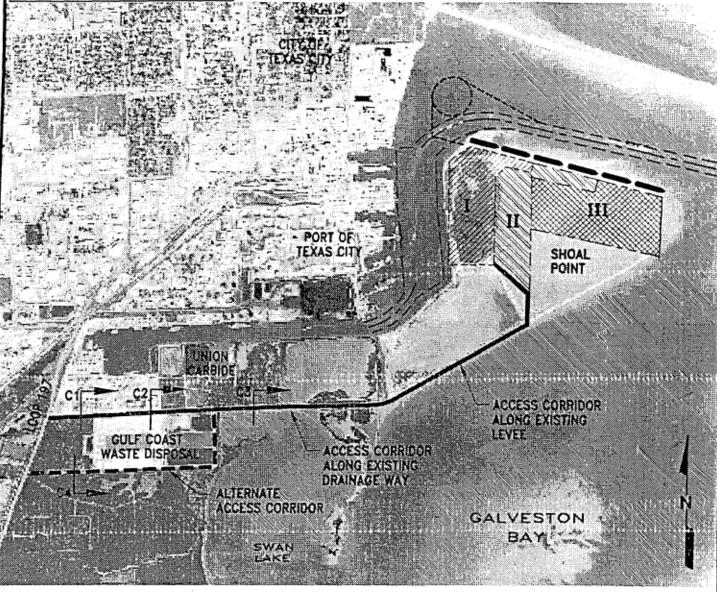
Proposed Project Plans



NOTES:

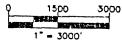
- 1. THE PROJECT PURPOSE IS TO BUILD A MODERN CONTAINER TERMINAL THAT INCLUDES CHANNEL DEEPENING, BERTHS, DOCKS, CONTAINER YARD AND ACCESS CORRIDOR.
- 2. MAJOR ASSETS OF SHOAL POINT ARE: LANDSIDE ACCESS, WATER ACCESS TO GULF, COMPATIBLE LAND USE, MINIMAL ENVIRONMENTAL IMPACTS AND ABILITY TO EXPAND.
- 3. THE ENTIRE PROJECT WILL BE PERMITTED, HOWEVER IT WILL BE BUILT IN THREE PHASES BEGINNING WITH A 125 ACRE TERMINAL AND TWO BERTHS WITH AN ULTIMATE SIZE OF 400 ACRES AND SIX BERTHS.

USACE Permit No.: 21979 Applicant: CITY OF TEXAS CITY Date July 12, 2000, 2, 9



FOR SECTIONS C1, C2, C3 AND C4 REFER TO SHEET 5.

PROJECT CONCEPT



NOTE:

1. ACCESS CORRIDOR PH I TO LOOP 197; PRIMARY = 3.0 MILESALTERNATE (ADD 1600') = 3.3 MILES



Shiner Moseley and Associates, inc. engineers α consultants

Corpus Christi/Houston

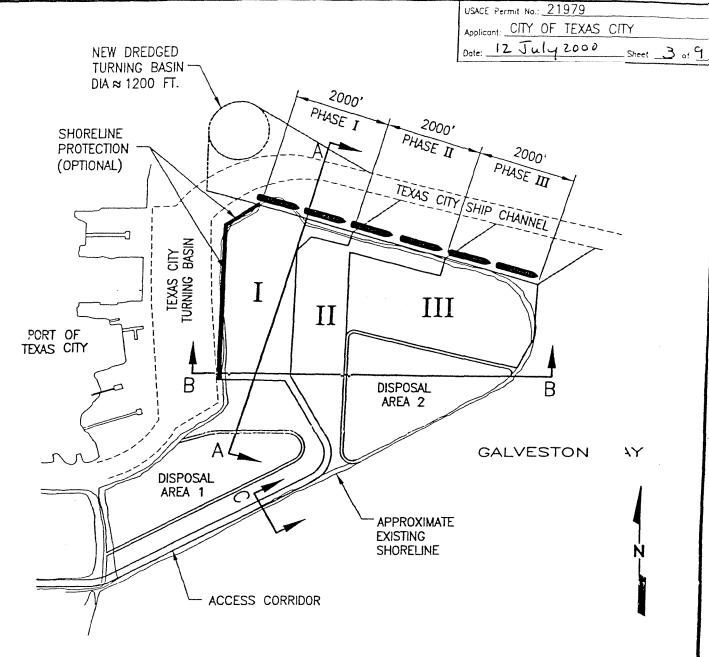
DESCRIPTION/ACTMTIES: CONSTRUCT TERMINAL WITH DOCKS AND ACCESS CORRIDOR, DREDGE BERTHS AND

TURNING BASIN, DEEPEN EXISTING CHANNEL

JOB NO.: 90324 DATE: 6/9/00

DATUM: USCE MLT (MEAN LOW TIDE)

REV. 7/7



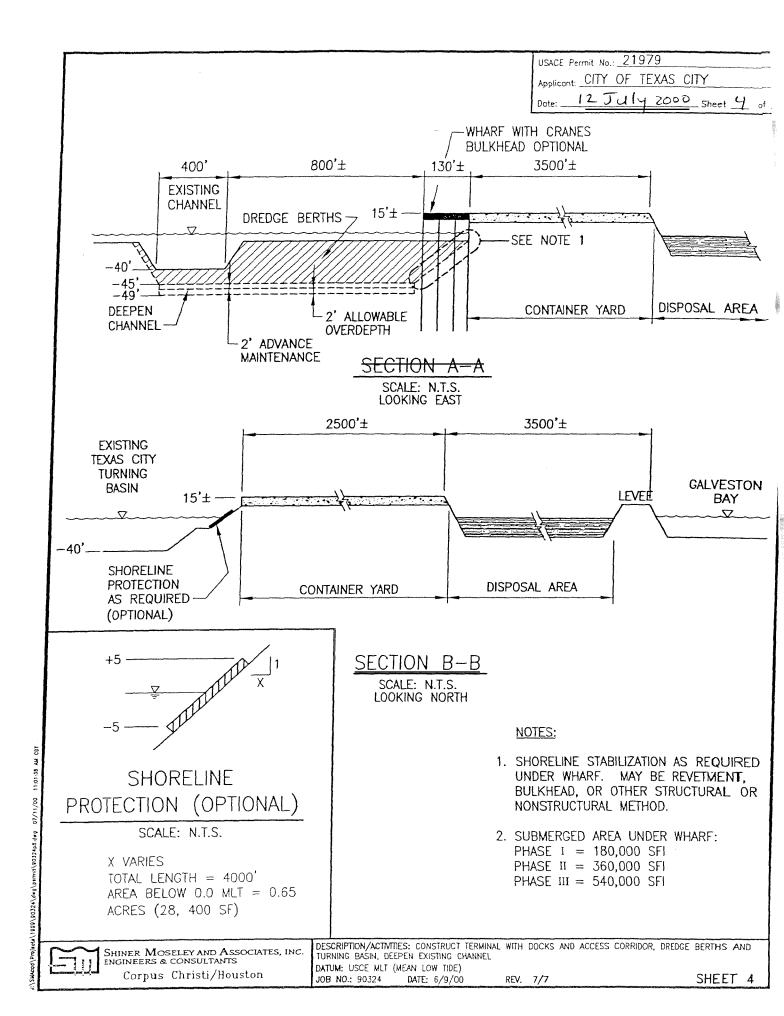
2000' = 2000

SHINER MOSELEY AND ASSOCIATES, INC. ENGINEERS & CONSULTANTS Corpus Christi/Houston

DESCRIPTION/ACTIVITIES: CONSTRUCT TERMINAL WITH DOCKS AND ACCESS CORRIDOR, DREDGE BERTHS AND TURNING BASIN, DEEPEN EXISTING CHANNEL

DATUM: USCE MLT (MEAN LOW TIDE) JOB NO.: 90324

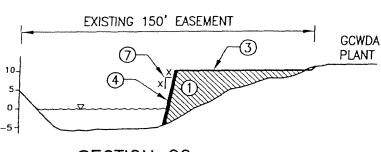
DATE: 6/9/00 REV. 7/7



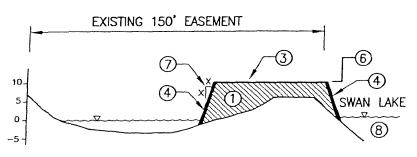
EXISTING 150' EASEMENT

WETLANDS

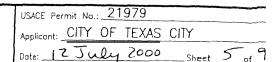
SECTION C1
BETWEEN LOOP 197 AND GCWDA



SECTION C2
AT GCWDA PLANT



SECTION C3
EAST OF GCWDA



NOTES:

- ① FILL WILL BE PLACED ALONG SOUTH SIDE OF DRAINAGE EASEMENT TO CONSTRUCT ACCESS ROAD.
- (2) THE EXISTING DRAINAGE WAY IS OFFSET TO THE NORTH SIDE OF THE EASEMENT; CENTERLINE OF DITCH IS APPROXIMATELY 50 FT. FROM EDGE OF EASEMENT.
- SINISHED CORRIDOR WILL HAVE A 60 FT. CROWN WIDTH TO ACCOMMODATE FOUR 12 FT. TRAFFIC LANES, SHOULDERS AND GUARDRAILS.
- SLOPE PROTECTION WILL BE PROVIDED AS APPROPRIATE. THIS MAY INCLUDE REVETMENT, REINFORCED EARTH MODULAR WALL, BULKHEADS, OTHER STRUCTURES OR A COMBINATION THEREOF.
- THE CORRIDOR WILL ACCESS ONLY THE TERMINAL AND WILL BE A PRIVATE ROAD WITH ACCESS CONTROL NEAR LOOP 197.
- (6) THE FINISHED ELEVATION WILL BE ABOUT +10 FT. WHICH IS APPROXIMATELY THE HEIGHT OF LOOP 197.
- SLOPE WILL VARY DEPENDING UPON CONSTRUCTION TECHNIQUES AND TYPE OF STABILIZATION USED.
- (8) SOME WETLANDS EXIST ALONG SWAN LAKE OUTSIDE OF R.O.W.
- (9) FOOTPRINT WILL VARY DEPENDING UPON TYPE OF STABILIZATION AND SLOPE PROTECTION USED. ASSUMING A 1:1 SLOPE AND ITS TYPICAL SECTION (C1-C3) THE ESTIMATED TOTAL ACCESS CORRIDOR FOOTPRINT IS 24.8 ACRES.
- (1) ASSUMING A 1:1 SLOPE THE TOTAL AREA OF SHORELINE PROTECTION BELOW 0.0 MLT IS APPROXIMATELY 39,000 SF.

5-0-5-	(4) x		7) X1x 4
	SECT	TION C4	

ACCESS CORRIDOR FOOTPRINT							
REACH	LENGTH	TOTAL AREA (AC.)					
DRAINAGEWAY	_	_					
E. OF GCWDA	4,200'	6.4					
ADJACENT TO GCWDA	3,600'	5.2					
W. OF GCWDA	1,300'	2.1					
SUBTOTAL	9,100'	13.7					
THRU DISPOSAL SITE	6,900'	11.1					
TOTAL	16,000'	24.8					

- 1. WIDTH OF FOOTPRINT VARIES, SEE SECTIONS
- 2. ASSUME FINAL ELEVATION OF 10 FT AND 1:1 SLOPE

Si En

Shiner Moseley and Associates, inc. engineers & consultants

Corpus Christi/Houston

(ALTERNATE)

DESCRIPTION/ACTIVITIES: CONSTRUCT TERMINAL WITH DOCKS AND ACCESS CORRIDOR, DREDGE BERTHS AND TURNING BASIN, DEEPEN EXISTING CHANNEL

DATUM: USCE MLT (MEAN LOW TIDE)

JOB NO.: 90324 DATE: 6/9/00

REV. 7/7

SHEET 5

224\dwg\permit\90324p6.dwg 07/11/00 10:30:52 AM CDT

NOTES:

- 1. THE EXISTING TEXAS CITY CHANNEL WILL BE DEEPENED FROM 40 FT. TO 45 FT. FROM THE SHOAL POINT TERMINAL SITE TO THE HOUSTON SHIP CHANNEL,
- 2. TO BE CONSISTENT WITH DREDGING PROCEDURES IN FEDERAL CHANNELS THE DEEPENING WILL INCLUDE 2 FT OF ADVANCE MAINTENANCE DREDGING AND 2 FT OF ALLOWABLE OVERDEPTH.
- 3. THE HOUSTON SHIP CHANNEL IS CURRENTLY BEING DEEPENED TO A DEPTH OF 45 FT.
- 4. THE CURRENT BOTTOM WIDTH OF 400 FT. WILL BE MAINTAINED.

SHINER MOS ENGINEERS &

Shiner Moseley and Associates, inc. engineers & consultants ${\color{black} }$

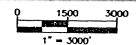
Corpus Christi/Houston

DESCRIPTION/ACTIVITIES: CONSTRUCT TERMINAL WITH DOCKS AND ACCESS CORRIDOR, DREDGE BERTHS AND TURNING BASIN, DEEPEN EXISTING CHANNEL

DATUM: USCE MLT (MEAN LOW TIDE)
JOB NO.: 90324 DATE: 6/9/00

DATE: 6/9/00 REV. 7/7

WETLAND IMPACT SUMMARY



COMPONENTS AND HABITAT	PHASE C	PHASE II	PHASE III	TOTAL
ACCESS CORRIDOR				
SPARTINA	0.3			0.3
SUBMERGED-UNVEG.	2.2	N/A	N/A	2.2
TOTAL JURISD.	2.5			2.5
CONTAINER YARD AND BERTH AREA				
SPARTINA	0.9	0	0	0.9
SUBMERGED-UNVEG.	37	37	37	111
MARSH-HI/LO	10.3	0	0	10.3
FRESHWATER-WETLAND	3.6	TBD	TBD	3.6(+TBD)
TOTAL JURISO.	51.8	-	-	_
TURNING BASIN				
SPARTINA	0			
SUBMERGED-UNVEG.	46.9	N/A	N/A	46.9
TOTAL JURISD.	46.9			46.9
CHANNEL				
SPARTINA	0			
SUBMERGED-UNVEG.	6.3	N/A	N/A	6.3
TOTAL JURISD.	6.3			6.3
SUMMARY				
SPARTINA	1.2	0	0	1.2
SUBMERGED-UNVEG.	92.4	37	37	166.4
MARSH-HI/LO	10.3	0	0	10.3
FRESHWATER-WETLAND	3.6	TBD	TBD	3.6(+TBD)
TOTAL JURISO.	107.5	37(+TBD)	37(+TBD)	181.5(+TBD)

NOTE:

NO JURISDICTIONAL DETERMINATION HAS BEEN DONE FOR PHASE II AND III. THIS WILL BE DONE 1-YEAR PRIOR TO CONSTRUCTION IN THOSE AREAS AND APPROPRIATE MITIGATION NEEDS DETERMINED. DOING DELINEATION NOW WOULD NOT PROVIDE USEFUL INFORMATION SINCE THESE ARE ACTIVE DISPOSAL CELLS THAT WILL BE USED BEFORE PHASE II AND III ARE BUILT.

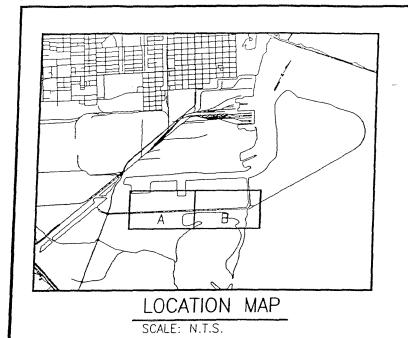
SHINER MOSELEY AND ASSOCIATES, INC. ENGINEERS & CONSULTANTS

Corpus Christi/Houston

DESCRIPTION/ACTIMITIES: CONSTRUCT TERMINAL WITH DOCKS AND ACCESS CORRIDOR, DREDGE BERTHS AND TURNING BASIN, DEEPEN EXISTING CHANNEL

DATUM: USCE MLT (MEAN LOW TIDE)

JOB NO.: 90324 DATE: 6/9/00 REV. 6/26/00



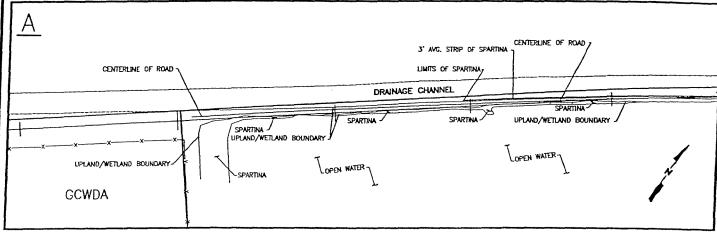
USACE Permit No.: 21979

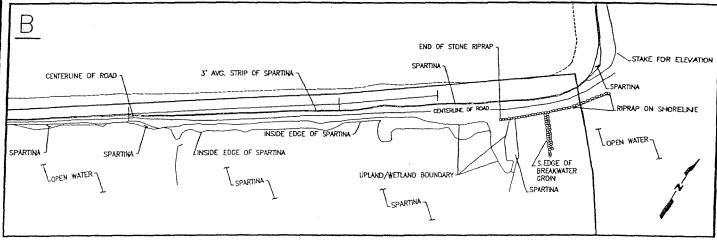
Applicant: CITY OF TEXAS CITY

Dote: 12 July 2000 Sheet 8 of

WETLANDS ALONG ACCESS CORRIDOR



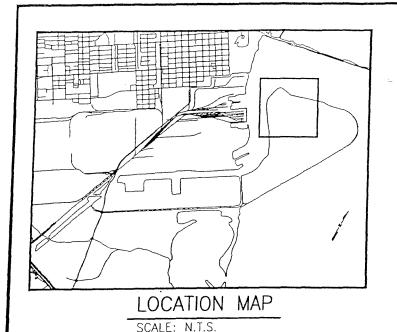




Shiner Moseley and Associates, inc. engineers & consultants Corpus Christi/Houston DESCRIPTION/ACTIVITIES: CONSTRUCT TERMINAL WITH DOCKS AND ACCESS CORRIDOR, DREDGE BERTHS AND TURNING BASIN, DEEPEN EXISTING CHANNEL

DATUM: USCE MLT (MEAN LOW TIDE)
JOB NO.: 90324 DATE: 6/9/00

REV. 7/7



USACE Permit No.: 21979

Applicant: CITY OF TEXAS CITY

Date: 12 July 2000 Sheet 9 of 9

SHOAL POINT WETLANDS WITHIN PHASE I

350 175

SPARTINA

SPARTINA

SPARTINA

SPARTINA

SPARTINA

SPARTINA

SPARTINA

SPARTINA

INTERMEDIATE/HIGH

SPARTINA

SPARTINA

SPARTINA

SPARTINA

SPARTINA

SPARTINA

SPARTINA

SPARTINA

SPARTINA

SPARTINA

SPARTINA

WAVE CUT BANK FLAG STAKES FOR ELEVATION

SPARTINA

SPARTINA

WAVE CUT BANK SPARTINA

APPROX. .35 ACRES

FRESHWATER WETLANDS

UPLAND/WETLAND BOUNDARY

APPROX. 2.61 ACRES

SHINER ENGINE

Shiner Moseley and Associates, inc. engineers & consultants

Corpus Christi/Houston

DESCRIPTION/ACTIVITIES: CONSTRUCT TERMINAL WITH DOCKS AND ACCESS CORRIDOR, DREDGE BERTHS AND TURNING BASIN, DEEPEN EXISTING CHANNEL

DATUM: USCE MLT (MEAN LOW TIDE)

JOB NO.: 90324 DATE: 6/9/00

REV. 7/7

ALTERNATIVES ANALYSIS SHOAL POINT CONTAINER TERMINAL EIS

An Alternatives Analysis workgroup was established to provide technical support to the EIS Project Team in the identification of the approach, identification and evaluation of available data, and review of preliminary results for the analysis of alternatives for the Shoal Point Container Terminal Environmental Impact Statement (EIS). The workgroup developed a tiered approach to the alternatives analysis, which involved a multi-step process of identification of potential alternatives followed by elimination of infeasible or unreasonable alternatives.

Tier I was the development of Screening Criteria (minimal requirements or maximum allowable impacts) for an alternative. These included:

- Site must be in protected water (natural or breakwater).
- Wharf/Shoreline requirement is a minimum of 6000' of wharf frontage.
- Minimum Acreage requirement is 400 acres (6-berth system). Combination sites (multiple sites with <6-berth systems) were not considered because there are a sufficient number of 400-acre sites and the greater efficiencies of 6-berth systems would not require the duplication of facilities and additional impacts of combination sites.
- Maximum Distance from deepwater channel (Houston and Texas City Ship Channels) is 5 miles. Impacts to the water column (turbidity, salinity intrusion); to bay bottom habitats (oysters, benthos, fisheries); and to air quality, associated with dredging >5 miles of new channel were determined to be excessive. There would also be navigation and safety issues, as well as concerns over the management and placement of the large amounts of extra dredged material.
- Ship Access requires a minimum channel depth of 45' and bridge clearance of 150'.

The Screening Criteria were used to identify the geographic range for potential locations of reasonable alternatives. A map outline was derived from the combination of the screening criteria, which was 5 miles from Houston or Texas City Ship Channels and with sufficient bridge clearance and minimum possible channel depth. Only sites within the "Geographic Limitations" outline were considered, which eliminated Trinity Bay, East Bay, West Bay, and the HSC above a point one-half mile down channel from the Beltway 8 bridge.

A search of the remaining Galveston Bay shoreline was conducted to identify possibly suitable 400-acre footprints, which resulted in the following alternative sites: Spillmans Island, Alexander Island, Cedar Point, Bayport, Shoal Point, Virginia Point, Pelican Island, and Bolivar Peninsula.

In Tier II, preliminary data were acquired, the Screening Criteria were applied to the sites identified in Tier I, and environmental impacts were considered, which eliminated the following alternatives for the reasons noted:

- Virginia Point: Excessive terrestrial and aquatic environmental impacts. Significant wetland impacts, which eliminated the site on Section 404(b)(1) considerations.
- Bolivar Peninsula: Excessive terrestrial and aquatic environmental impacts and navigation and safety impacts associated with construction of new causeway and additional channel.
 No particular benefits over Pelican Island Site and there is a conflict with Houston-Galveston Navigation Channels, Texas, Beneficial Uses Program (Bolivar Marsh).

Tier III involved the identification of the best footprint for the proposed container port. The footprint was selected to minimize negative environmental impacts and conflicts with land use and still serve the needs of the applicant. This produced the final list and footprints of reasonable alternative sites: Cedar Point, Spillmans Island, Alexander Island, Bayport, Shoal Point, and Pelican Island.

The EIS Project Team is responsible for generating the baseline (Affected Environment Section of EIS) and potential impacts (Impacts/Environmental Consequences Section of EIS) for all of the reasonable alternatives identified above as well as the No-build alternative. These data will be gathered, summarized and compared by Project Team members in collaboration with the Alternatives Analysis workgroup and other workgroups, where appropriate. The ultimate goal is to determine the environmentally preferable alternative and those alternatives with unacceptable environmental impacts. This information will be presented in detail in the pertinent sections of the Draft EIS, and summarized in the Alternatives Section of the Draft EIS.

LAND TRANSPORTATION (TRAFFIC) IMPACT ANALYSIS SHOAL POINT CONTAINER TERMINAL EIS

The PBS&J land transportation group plans to complete turning movement traffic counts, 24-Hour counts, capacity analysis, railroad analysis, Level of Service (LOS) analysis, and trip generation analysis (subject to H-GAC completing modeling) to assess the possible traffic impacts of the project on the area's transportation facilities. The PBS&J land transportation group is in the process of completing traffic counts and preliminary analysis for the proposed alternate sites. The intersections being closely studied due to the impact of the proposed transportation facility are:

Proposed Site:

Texas City (Shoal Point)

- 1.) FM 519 at Loop 197
- 2.) FM 519 at SH 3
- 3.) FM 519 at SH 146
- 4.) SH 146 at FM 1765
- 5.) SH 3/SH 146 at Loop 197 (includes IH 45 Exit 7 Analysis)
- 6.) SH 146 at FM 2094
- 7.) SH 146 at 6th St.
- 8.) SH 146 at FM 518
- 9.) SH 146 at FM 519

The intersections planned to be studied for the alternate sites are:

Alternate Sites:

Alexander Island

- 1.) SH 225 at Battleground
- 2.) SH 255 at Miller's Cut Off
- 3.) Miller's Cut Off at Battleground

Spillman's Island

- 1.) Barbours Cut Boulevard at SH 146
- 2.) Barbours Cut Boulevard at Broadway

Cedar Point

- 1.) SH 146 at FM 1405
- 2.) Business SH 146 at Spur 55

Bayport

1.) SH 146 at Port Road

Pelican Island

- 1.) Harborside at Pelican Causeway
- 2.) Harborside at IH-45
- 3.) Broadway at 51st Street

The railroad intersections planned to be studied are:

Railroad Impact:

- 1.) SH 146 at Loop 197
- 2.) FM 519 at Loop 197

The main corridors being analyzed due to the proposed transportation facility are IH-45 and State Highway (SH) 146. Working in conjunction with Houston-Galveston Area Council (H-GAC), the PBS&J land transportation group will be presenting preliminary results of these analyses at the public meeting.

WATER TRANSPORTATION (NAVIGATION) SHOAL POINT CONTAINER TERMINAL EIS

The Texas City Channel is one of the nation's major petrochemical arteries, accounting for a substantial portion of the crude oil imports and product shipments in the region. The Shoal Point Container Terminal Project will involve substantial changes to the channel and to existing vessel traffic mix, as well as potentially affecting the future conditions faced by local interests. Workgroup meetings to date have focused on identifying the impacts that would need to be addressed in the EIS and on other specific issues that are briefly summarized below.

One of the major project effects will be changes in the vessel traffic, resulting delays, and the increase in the number of encounters between vessels. These changes are being quantified with a simple numerical procedure using traffic from the year 2000 as a base. The product will be estimates of existing and future delay hours by vessel type, and numbers of encounters, again by vessel type.

An issue that was raised during scoping was the location of the proposed turning basin near the existing Sterling Chemicals docks, and the resulting potential for increasing wave and propeller effects. As a result of coordination on this issue, the applicant has elected to move the turning basin further to the east and away from the area of concern. Another point raised by Coast Guard representatives was the concern that vessel traffic by the TCIT docks might produce sufficient surge to affect bunkering (i.e., fueling) operations at the docks. It was concluded that a surge analysis would be performed to quantify this aspect. An issue addressed in the committee but not yet resolved is the potential for a barge lane to provide additional room for navigation and to mitigate effects on delays and risks of collisions during encounters.

Another potential indirect or cumulative effect of the project is the increased likelihood that the rest of the Texas City Channel (i.e., from the proposed terminal to the inner harbor) would be deepened to 45 feet, consistent with the federal navigation project in Galveston Bay.

All of these issues are being addressed and quantified to the extent possible in the work now underway on the Draft EIS.

DREDGED MATERIAL MANAGEMENT PLAN SHOAL POINT CONTAINER TERMINAL EIS

The Shoal Point Container Terminal project will generate about 8 million cubic yards (mcy) of new dredged material in the first phase of construction and an additional 3.2 mcy of new work during the second and third phases of construction.

It has been federal policy for many years that major dredging projects have a plan for the proper use or disposal of dredged material for a 50-year period. While this is a City of Texas City permit application, the stated intent of all parties is that the project will ultimately be integrated into the federal Texas City Channel navigation project. Accordingly, a Dredged Material Management Plan (DMMP) must be developed that is acceptable to the City of Texas City, to the Corps that may ultimately assume implementation, and to the resource agencies and public that are normally a part of environmental resource planning.

An inter-agency workgroup was assembled to develop the DMMP. The workgroup has met three times to date and worked through a wide range of issues and alternatives. A substantial degree of consensus has been reached on policies and a preliminary plan, shown on the attached figure, has been developed.

Consensus was reached early that the main beneficial use of dredged material will be to create new tidal wetlands to compensate as much as possible for the wetland losses over the last century. One major part of that will be to provide approximately 2.4 mcy of new work material to Swan Lake where the state and federal agencies are currently involved in remediation efforts can use the material to create new tidal wetlands, restoring the area to its condition prior to the major loss of wetlands from subsidence.

Another new construction element would be the marsh on the western side of Pelican Island. Essentially, this would be built from new work material dredged from the outer reaches of the channel.

The main placement areas, and those that would provide the bulk of the capacity for maintenance material, would be the peninsulas coming off of Shoal Point. The levees on the perimeter would be built from stiff clay in the new work dredging. The outside portion exposed to wave attack would be armored to control erosion. During the initial years before they are needed to hold maintenance dredging materials, these areas would have openings to allow water exchange. When they are ready for use they would be closed and appropriate drainage structures installed so they can be used to de-water dredged material. After an area is filled, it would be graded, tidal channels opened, and planted to establish marsh areas.

The area to the north of the Dike near Dollar Point is proposed to be a combination wetland and water access point with parking, picnic and boat ramp facilities. It would be constructed during the second phase of the project. A major consideration will be to provide an optimal facility to serve the ecological as well as recreational needs of the community.

At this point the design work of the project is nearing completion and efforts are moving more towards quantification of impacts. One part of that process is a survey of the areas that are to be involved in the DMMP to locate oyster reefs and possible cultural resources. This survey may possibly identify a significant resource that it is possible to avoid impacting by moving some feature of the project. If that occurs, the preliminary plan will be modified to the extent necessary to minimize impacts.

Meanwhile the information gained during the survey, as well as information available from other studies in Galveston Bay, are being used to quantify the impacts of the project on area resources. These impacts will include conversions of bay bottom habitat to other uses such as tidal marsh or upland areas, and increased turbidity during the dredging operations. If impacting any significant oyster reefs cannot be avoided during construction, they would be mitigated by building replacement reefs in other areas.

AIR QUALITY ANALYSIS SHOAL POINT CONTAINER TERMINAL EIS

PRELIMINARY EMISSION CALCULATIONS

- Preliminary emission calculations have been prepared for both the construction and operation activities of the project considering access, dredging and the terminal operations
- The project will use Electric Dredging with waterborne construction material delivery
- Emission calculations incorporated emissions controls for emissions from various sources consistent with the December 6, 2000 Houston-Galveston Area SIP:
 - Speed limit controls
 - Cleaner Diesel
 - Accelerated purchase of Tier 2/3 equipment

PRELIMINARY GENERAL CONFORMITY ANALYSIS

- Meetings have been held with Texas Natural Resource Conservation Commission and the U.S. Environmental Protection Agency to discuss General Conformity
- TNRCC staff was informed of the estimated construction and operating emissions as the HGA SIP was being finalized
- Based on the results of these meetings a preliminary determination has been made that:
- Construction emissions are included in the currently approved SIP construction budget
- The HGA SIP incorporates the significant transportation-related operating emissions due to projected growth in container traffic
- Project emissions will meet the General Conformity requirements

PRELIMINARY IMPACTS ANALYSIS

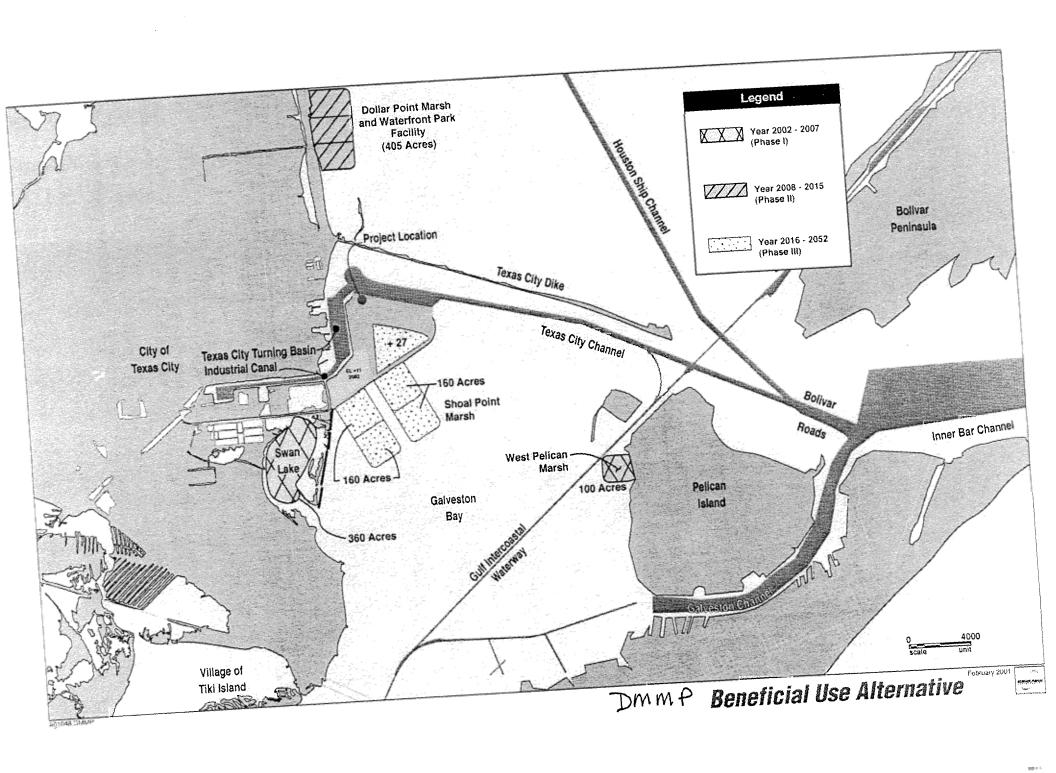
The following preliminary summary information has been prepared:

- Existing air quality information for Galveston and Houston-Galveston Area
- Comparison of construction /operating emissions for the project to Galveston County point sources
- Comparison of Shoal Point total operating emissions to HGA point sources and to the HGA SIP

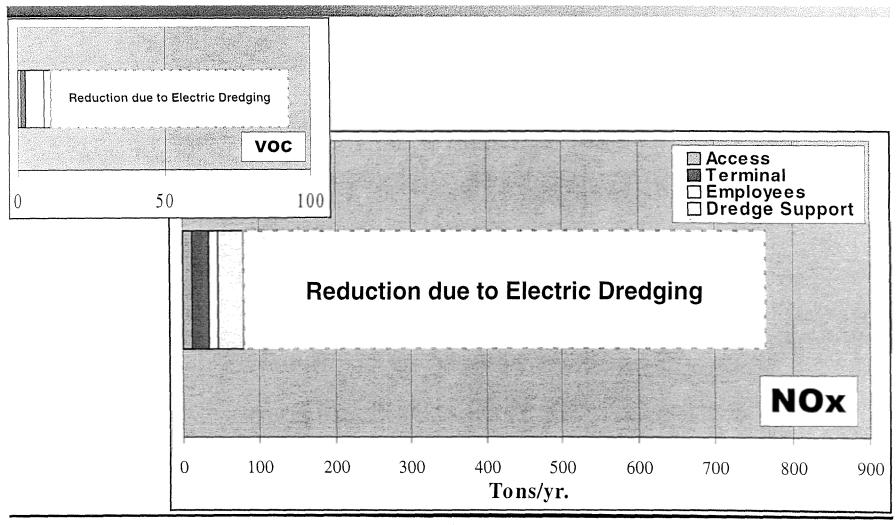
GENERAL TOPICS TO BE ADDRESSED IN THE SHOAL POINT CONTAINER TERMINAL EIS

In addition to Air Quality, Land and Water Transportation, and Dredged Material Management, the following topics will be addressed in the Draft EIS for each of the alternative site locations:

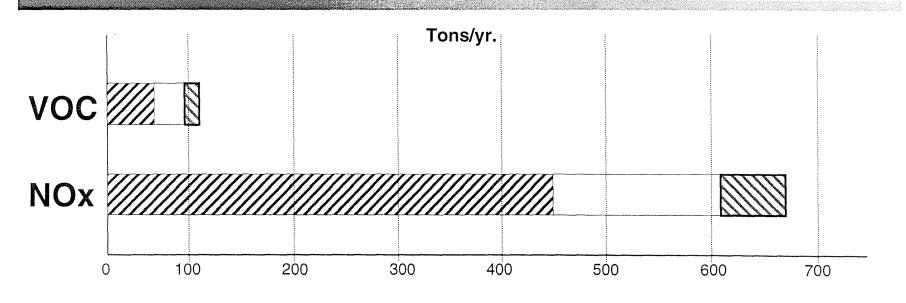
Noise Physiography, Topography, and Bathymetry Geology Energy and Mineral Resources Surface Soils Ground Water Hydrology
Hazardous Material Site Assessment
Surface Water Hydrology
Water Quality
Commercial and Recreational Navigation
Vegetation
Wetlands
Terrestrial Wildlife
Aquatic Ecology
Endangered and Threatened Species
Cultural Resources
Land Use/Recreation/Aesthetics
Socioeconomics
Community Infrastructure and Municipal Services
Texas Coastal Zone Consistency Determination



Construction Emission Sources - Phase I



Operating Emission Sources - Phase I



LANDSIDE Z

Trucks Rail Autos **MARINE** *

Ships Tugs Bunkering

* Existing USACE maintenance not included

TERMINAL

Mobile cranes
Hustlers
Forklifts
Maintenance
Cleaning / repair



APPENDIX H-6

USACE CORRESPONDENCE WITH RESOURCE AGENCIES REGARDING PARTICIPATION IN ENVIRONMENTAL IMPACT STATEMENT

TO TAIR SURVEY

DEPARTMENT OF THE ARMY

GALVESTON DISTRICT. CORPS OF ENGINEERS P.O. BOX 1229

GALVESTON, TEXAS 77553-1229

. 29

EPLY TO

Executive Office

Mr. Carlos Mendoza United States Fish and Wildlife Service 17629 El Camino Real, Suite 211 Houston, Texas 77058

Dear Mr. Mendoza:

I am inviting your agency to participate as a technical advisor with the U.S. Army Corps of Engineers, Galveston District, in preparing an Environmental Impact Statement (EIS) for Department of the Army Permit Application 21979. The applicant, the City of Texas City, is proposing to develop a container terminal on Shoal Point, adjacent to the Texas City Channel, Galveston County, Texas.

Based on my review of the City's proposal and concerns expressed at pre-application meetings, this EIS will require information and analysis of fish and wildlife resources and a review for endangered species. Although, I expect my staff to manage the overall development of the EIS, I would appreciate your agency's assistance with the technical review of the fish and wildlife resources and endangered species information. I anticipate needing someone from your staff that can attend several meetings, make recommendations on the above subjects, and review and comment on subsequent sections on of the EIS document.

PBS&J will be the contractor responsible for the actual data collection, analysis and document preparation. A scoping meeting is scheduled for October 3, 2000, at the Charles Doyle Convention Center, in Texas City, Texas. The overall development of the draft EIS is expected to take approximately 12 months, following the scoping meeting.

I look forward to your participation in this effort. Should you have any questions please contact Ms. Sharon Manzella Tirpak, at the above address or by telephone at 409-766-3136.

Sincerely,

Nicholas J. Buechler Colonel, Corps of Engineers District Engineer ANTHAMATTEN PE-RB

128 PE-R

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SAUNDERS 12

MOORE

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DEPARTMENT OF THE ARMY

GALVESTON DISTRICT. CORPS OF ENGINEERS P.O. BOX 1229

GALVESTON. TEXAS 77553-1229

REPLY TO ATTENTION OF Executive Office

AUG 29

CDR Richard M. Kaser, P.E. United States Coast Guard Marine Safety Unit 601 Rosenberg, Room 309 Galveston, Texas 77550-1705

Dear Commander Kaser:

I am inviting your agency to participate as a technical advisor with the U.S. Army Corps of Engineers, Galveston District, in preparing an Environmental Impact Statement (EIS) for Department of the Army Permit Application 21979. The applicant, the City of Texas City, is proposing to develop a container terminal on Shoal Point, adjacent to the Texas City Channel, Galveston County, Texas.

Based on my review of the City's proposal and concerns expressed at previous meetings, this EIS will require information and analysis of marine traffic safety issues. Although, I expect my staff to manage the overall development of the EIS, I would appreciate your agency's assistance with the technical review of marine traffic information. I anticipate needing someone from your staff that can attend several meetings, make recommendations on marine traffic concerns, and review and comment on subsequent sections on of the EIS document.

PBS&J will be the contractor responsible for the actual data collection, analysis, and document preparation. A scoping meeting is scheduled for October 3, 2000, at the Charles Doyle Convention Center, in Texas City, Texas. The overall development of the draft EIS is expected to take approximately 12 months, following the scoping meeting.



DEPARTMENT OF THE ARMY

GALVESTON DISTRICT. CORPS OF ENGINEERS
P.O. BOX 1229

GALVESTON. TEXAS 77553-1229

REPLY TO ATTENTION OF

Executive Office

29

Mr. Gary K. Trietsch District Engineer Texas Department of Transportation P.O. Box 1386 Houston, Texas 77251-1386

Dear Mr. Trietsch:

I am inviting your agency to participate as a technical advisor with the U.S. Army Corps of Engineers, Galveston District, in preparing an Environmental Impact Statement (EIS) for Department of the Army Permit Application 21979. The applicant, the City of Texas City, is proposing to develop a container terminal on Shoal Point, adjacent to the Texas City Channel, Galveston County, Texas.

Based on my review of the City's proposal and concerns expressed at previous meetings, this EIS will require data collection and analysis of transportation related information. Although, I expect my staff to manage the overall development of the EIS, I would appreciate your agency's assistance with the technical review of transportation information. I anticipate needing someone from your staff that can attend several meetings, make recommendations on transportation data collection, and review and comment on subsequent sections on of the EIS document.

PBS&J will be the contractor responsible for the actual data collection, analysis and document preparation. A scoping meeting is scheduled for October 3, 2000, at the Charles Doyle Convention Center in Texas City, Texas. The overall development of the draft EIS is expected to take approximately 12 months, following the scoping meeting.



DEPARTMENT OF THE ARMY GALVESTON DISTRICT. CORPS OF ENGINEERS P.O. BOX 1229 GALVESTON. TEXAS 77553-1229

Executive Office

AUG 29

Mr. Andreas Mager, Jr. Southeast Fisheries Center Regional Office 9721 Executive Center Drive St. Petersburg, Florida 33703

Dear Mr. Mager:

I am inviting your agency to participate as a technical advisor with the U.S. Army Corps of Engineers, Galveston District, in preparing an Environmental Impact Statement (EIS) for Department of the Army Permit Application 21979. The applicant, the City of Texas City, is proposing to develop a container terminal on Shoal Point, adjacent to the Texas City Channel, Galveston County, Texas.

Based on my review of the City's proposal and concerns expressed at pre-application meetings, this EIS will require data collection and analysis of the management of dredged material disposal, and on living marine resources. Although, I expect my staff to manage the overall development of the EIS, I would appreciate your agency's assistance with the technical review of the dredged material disposal management and living resources information. I anticipate needing someone from your staff that can attend several meetings, make recommendations on the above subjects, and review and comment on subsequent sections on of the EIS document.

PBS&J will be the contractor responsible for the actual data collection, analysis, and document preparation. A scoping meeting is scheduled for October 3, 2000, at the Charles Doyle Convention Center, in Texas City, Texas. The overall development of the draft EIS is expected to take approximately 12 months, following the scoping meeting.

DEPARTMENT OF THE ARMY GALVESTON DISTRICT, CORPS OF ENGINEERS P.O. BOX 1229

GALVESTON, TEXAS 77553-1229

29

REPLY TO ATTENTION OF Executive Office

Mr. C. D. Reagan Division Administrator Federal Highways Administration 300 East 8th Street, Room 826 Austin, Texas 78701

Dear Mr. Reagan:

I am inviting your agency to participate as a technical advisor with the U.S. Army Corps of Engineers, Galveston District, in preparing an Environmental Impact Statement (EIS) for Department of the Army Permit Application 21979. The applicant, the City of Texas City, is proposing to develop a container terminal on Shoal Point, adjacent to the Texas City Channel, Galveston County, Texas.

Based on my review of the City's proposal and concerns expressed at pre-application meetings, this EIS will require data collection and analysis of transportation related information. Although, I expect my staff to manage the overall development of the EIS, I would appreciate your agency's assistance with the technical review of the transportation information. I anticipate needing someone from your staff that can attend several meetings, make recommendations on the transportation data collection and analysis, and review and comment on subsequent sections on of the EIS document.

PBS&J will be the contractor responsible for the actual data collection, analysis, and document preparation. A scoping meeting is scheduled for October 3, 2000, at the Charles Doyle Convention Center, Texas City, Texas. The overall development of the draft EIS is expected to take approximately 12 months, following the scoping meeting.

DEPARTMENT OF THE ARMY GALVESTON DISTRICT. CORPS OF ENGINEERS P.O. BOX 1229 GALVESTON, TEXAS 77553-1229

REPLY TO ATTENTION OF:

ACL 29

Executive Office

Mr. Mike Jansky Regional EIS Coordinator Office of Planning and Coordination Environmental Protection Agency, Region VI 1445 Ross Avenue Dallas, Texas 75202

Dear Mr. Jansky:

I am inviting your agency to participate as a technical advisor with the U.S. Army Corps of Engineers, Galveston District, in preparing an Environmental Impact Statement (EIS) for Department of the Army Permit Application 21979. The applicant, the City of Texas City, is proposing to develop a container terminal on Shoal Point, adjacent to the Texas City Channel, Galveston County, Texas.

Based on my review of the City's proposal and concerns expressed at previous meetings, this EIS will require data collection and analysis of air quality related information. Although, I expect my staff to manage the overall development of the EIS, I would appreciate your agency's assistance in the technical review of air quality information. I anticipate needing someone from your staff that can attend several meetings, make recommendations on air quality data collection and analysis, and review and comment on subsequent sections on of the EIS document.

PBS&J will be the contractor responsible for the actual data collection, analysis, and document preparation. A scoping meeting is scheduled for October 3, 2000, at the Charles Doyle Convention Center, in Texas City, Texas. The overall development of the draft EIS is expected to take approximately 12 months, following the scoping meeting.

REPLY TO

DEPARTMENT OF THE ARMY GALVESTON DISTRICT, CORPS OF ENGINEERS P.O. BOX 1229 GALVESTON. TEXAS 77553-1229

Executive Office

7,50 29

Mr. Jeffery Saitas **Executive Director** Texas Natural Resources Conservation Commission MC109, P.O. Box 13087 Austin, Texas 78711-3087

Dear Mr. Saitas:

I am inviting your agency to participate as a technical advisor with the U.S. Army Corps of Engineers, Galveston District, in preparing an Environmental Impact Statement (EIS) for Department of the Army Permit Application 21979. The applicant, the City of Texas City, is proposing to develop a container terminal on Shoal Point, adjacent to the Texas City Channel, Galveston County, Texas.

Based on my review of the City's proposal and concerns expressed at previous meetings, this EIS will require data collection and analysis of air and water quality related information. Although, I expect my staff to manage the overall development of the EIS, I would appreciate your agency's assistance with the technical review of the air and water quality information. I anticipate needing someone from your staff that can attend several meetings, make recommendations on air and water quality information, and review and comment on subsequent sections on of the EIS document.

PBS&J will be the contractor responsible for the actual data collection, analysis, and document preparation. A scoping meeting is scheduled for October 3, 2000, at the Charles Doyle Convention Center, in Texas City, Texas. The overall development of the draft EIS is expected to take approximately 12 months, following the scoping meeting.

DEPARTMENT OF THE ARMY GALVESTON DISTRICT. CORPS OF ENGINEERS P.O. BOX 1229 GALVESTON, TEXAS 77553-1229

REPLY TO ATTENTION OF:

Executive Office

September 5, 2000

Mr. Garry McMahn Texas General Land Office 11811 North D Street LaPorte, Texas 77571

Dear Mr. McMahn:

I am inviting your agency to participate as a technical advisor with the U.S. Army Corps of Engineers, Galveston District, in preparing an Environmental Impact Statement (EIS) for Department of the Army Permit Application 21979. The applicant, the City of Texas City, is proposing to develop a container terminal on Shoal Point, adjacent to the Texas City Channel, Galveston County, Texas.

Based on my review of the City's proposal and concerns expressed at previous meetings, this EIS will require data collection and analysis on state-owned submerged lands. Although, I expect my staff to manage the overall development of the EIS, I would appreciate your agency's assistance with the technical review of the submerged land information. I anticipate needing someone from your staff that can attend several meetings, make recommendations on submerged lands information and review and comment on subsequent sections on of the EIS Document.

PBS&J will be the contractor responsible for the actual data collection, analysis, and document preparation. A scoping meeting is scheduled for October 3, 2000, at the Charles Doyle Convention Center, in Texas City, Texas. The overall development of the draft EIS is expected to take approximately 12 months, following the scoping meeting.





UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 6 1445 ROSS AVENUE, SUITE 1200 DALLAS, TX 75202-2733

September 13, 2000

Colonel Nicholas J. Buechler District Engineer Galveston District, Corps of Engineers P.O. Box 1229 Galveston, TX 77553-1229

Dear Colonel Buechler:

Thank you for your letter dated August 29, 2000, inviting our participation as a technical advisor in the development of a Environmental Impact Statement (EIS) pursuant to the National Environmental Policy Act (NEPA) for construction of a container terminal on Shoal Point, adjacent to the Texas City Channel, Galveston County, Texas. Specifically you have asked for assistance in the technical review of air quality information.

In response to this requests, I am suggesting that you contact Mr. Thomas H. Diggs, who is Chief of the Air Planning Section at Region 6. Mr. Diggs and his staff are most knowledgeable of the National Ambient Air Quality Standards, air conformity, and the most current air quality assessment methodology used for predicting and assessing air quality impacts. Mr. Diggs can be contacted by phone at 214-665-7214.

I hope this information is helpful to you and your staff in the development of the above NEPA document. We look forward in working with your agency. If you have any other questions concerning NEPA and our role in the environmental review process, please have your staff call me at 214-665-7451.

Sincerely yours,

Michael P. Jansky, P.E.

Regional 309 Coordinator





P.O. BOX 1386 • HOUSTON, TEXAS 77251-1386 • (713) 802-5000

September 14, 2000

Galveston County Environmental Impact Statement Texas City Port Container Terminal

CONTACT: DPD

Colonel Nicholas J. Buechler U. S. Army Corps of Engineers Galveston District P. O. Box 1229 Galveston, Texas 77553-1229

Dear Colonel Buechler:

This is in response to your letter dated August 29, 2000, regarding the Texas Department of Transportation's participation as a technical advisor in preparing an Environmental Impact Statement (EIS) for Department of the Army Permit Application 21979.

Mr. Hassan Nikooei, P.E., is the project manager for the SH 146 Major Investment Study (MIS). The SH 146 MIS could be impacted by the development of the Texas City Port Container Terminal; therefore, we are designating Mr. Nikooei to attend your meetings. Mr. Rakesh Tripathi, P.E., from our Transportation Planning Section will also be attending these meetings. It is our recommendation that you also include the Houston-Galveston Area Council in this study, as an excellent source of information.

Should you have additional questions, please contact Mr. Nikooei at (713) 802-5256.

Gary K. Trietsch, P.E.

District Engineer Houston District

incerel√

cc: Mr. Hassan Nikooei, P.E.

Mr. Rakesh Tripathi, P.E.



United States Department of the Interior FISH AND WILDLIFE SERVICE

Division of Ecological Services 17629 El Camino Real, Suite #211 Houston, Texas 77058-3051 281/286-8282 / (FAX) 281/488-5882



September 11, 2000

Sharon Manzella Tirpak US Army Corps of Engineers P.O. BOX 1229 Galveston, Texas 77553-1229

Dear Ms. Tirpak:

The U.S. Fish and Wildlife Service accepts your invitation to participate as a technical advisor in preparing the Environmental Impact Statement (EIS) for Department of the Army Permit Application 21979, City of Texas City's proposed Shoal Point container terminal. Any questions concerning fish and wildlife resources and endangered species can be directed toward Moni DeVora. She will be representing the U.S. Fish and Wildlife Service, Clear Lake Ecological Services Field Office.

Thank you for the opportunity to participate with the EIS process concerning this proposed project. If you need any additional information, please contact me or Moni DeVora at 281/286-8282.

Sincerely

Çárlos H. Mendoza

Project Leader, Clear Lake ES Field Office

APPENDIX H-7

TEXAS COASTAL MANAGEMENT PLAN CONSISTENCY STATEMENT

June 23, 2000

J90324

Ms. Sharon Tirpack U.S. Army Corps of Engineers P.O. Box 1229 Galveston, Texas 77553

RE: TCMP CONSISTENCY DETERMINATION

Dear Ms. Tirpack:

Enclosed is an executed copy of the TCMP consistency statement as you requested. Call if you have any questions.

Sincerely,

SHINER MOSELEY AND ASSOCIATES, INC.

Joe C. Moseley, Ph.D., P.E.
Principal

Principal

JCM/as

cc w/enclosure: Doug Hoover

Gene Smith Bill Allen

Applicant should sign this statement and return to:

U.S. Army Corps of Engineers Regulatory Branch P.O. Box 1229 Galveston, Texas 77553-1229

Fax: 409-766-3931

Applicant's Name: City of Texas City

Project Manager: Sharon Manzella Tirpak

Permit Number: 21979

The proposed activity complies with Texas' approved coastal management program and will be conducted in a manner consistent with such program.

Any questions regarding the Texas Coastal Management Program should be referred to:

Janet Fatheree Texas General Land Office Coastal Coordination Council 1700 North Congress Avenue, Room 617 Austin, Texas 78701-1495

1-800-852-3224 or 512-463-5385 512-475-0680 Fax

- ; • • • •



Coastal Coordination Council

P.O. Box 12873 • Austin, Texas 78711-2873 • (512) 463-5385 • FAX (512) 475-0680

Chairman

David Dewhurst
Texas Land Commissioner

Members

Michael L. Williams Railroad Commission of Texas

Dr. William H. Clayton
Coastal Government
Representative

John Barrett
Agriculture Representative

Bob DunkinCoastal Business Representative

Jack Hunt
Texas Water Development Board

Robert J. Huston
Texas Natural Resource
Conservation Commission

John W. Johnson
Texas Transportation Commission

Elizabeth A. Nishet Coastal Resident Representative

Robert R. Stickney Sea Grant College Program

Donald Swann
Texas State Soil & Water
Conservation Board

Mark E. Watson, Jr. Parks & Wildlife Commission of Texas

> Diane P. Garcia Council Scoretary

Permit Service Center 1 866 894 3578 September 12, 2002

Mr. Doug Hoover City of Texas City P.O. Box 2608 Texas City, TX 77592

Re: U.S. Army Corps of Engineers Permit Application 21979

CMP#: 02-0006-F6

Dear Mr. Hoover:

Pursuant to Section 506.30 of 31 TAC of the Coastal Coordination Act, the project referenced above has been reviewed for consistency with the Texas Coastal Management Program (CMP).

Based on information you have supplied regarding the project referenced above, it has been determined that this project is above the Texas Commission on Environmental Quality (TCEQ) thresholds for referral to the Coastal Coordination Council (CCC). The TCEQ will be solely responsible for determining the project's consistency with the goals and policies of the CMP. This determination will accompany TCEQ's Section 401 certification for the permit referenced above.

Sincerely,

Consistency Review Coordinator

Texas General Land Office

TRC/dac

cc: Sharon Manzella Tirpak, COE

Mark Fisher, TCEQ

Kristan Clann, GLO Permit Service Center

Garry McMahan, GLO Field Service

APPENDIX H-8

CORRESPONDENCE WITH U.S. FISH AND WILDLIFE SERVICE REGARDING THREATENED AND ENDANGERED SPECIES



United States Department of the Interior

FISH AND WILDLIFE SERVICE

Division of Ecological Services 17629 El Camino Real #211 Houston, Texas 77058-3051 281/286-8282 / (FAX) 281/488-5882



May 4, 2001

Kathy Calnan PBS&J 206 Wild Basin Road, Suite 300 Austin, Texas 78746

Dear Ms. Calnan:

This responds to your March 22, 2001 letter requesting threatened and endangered species information for your project area. You are preparing an Environmental Impact Statement for the U.S. Army Corps of Engineers for the proposed Shoal Point Container Terminal. The alternative analysis has identified Cedar Point, Spilmans Island, Alexander Island, Bayport, Shoal Point and Pelican Island as sites needing more rigorous study. These sites are in either Harris, Galveston or Chambers counties, Texas.

At this time, we are providing comments only on federally listed threatened and endangered species issues associated with the proposed project. The Service will provide any other comments and concerns we may have with the proposed project during the agencies review period of the proposed EIS and any associated permits.

Enclosed is an inventory of species of concern for Harris, Galveston and Chambers counties. The inventory includes species that are officially listed as threatened or endangered under the Endangered Species Act as well as candidate species, which are currently under consideration by the U.S. Fish and Wildlife Service for listing as threatened or endangered, but which are not yet the subject of a proposed rule. Candidate species have no legal status and receive no protection under the Act. They are identified for project planning purposes only and to alert you to the possibility that they may be proposed for listing at some future time.

A review of Service files indicates that the endangered brown pelican *Pelecanus occidentalis* nests on Little Pelican Island, a spoil disposal island located to the northwest of Pelican Island. This island has been used by brown pelicans since 1992, with approximately 100 pairs of brown pelicans nesting on the island during the spring of 2000. This site is also used by other colonial nesting waterbirds. To avoid disturbing the brown pelicans and other birds, all activity should remain a minimum of 1000 feet away from the nesting areas during the peak nesting season from February 15 to September 1.

If you have any questions or if we can be of further assistance, please contact Edith Erfling

at 281/286-8282.

No attachments came with letter, Sincerely, So E. Erfling emailed later.

5/11/01- K. Calnan

Carlos H/Mendoza Project Leader, Clear Lake ES Field Office

Calnan, Kathy B

From: Sent:

Edith_Erfling@fws.gov Friday, May 11, 2001 9:07 AM kbcalnan@pbsj.com T&E Species

To: Subject:



Attached is the list for our work area. sorry about not enclosing it

with our letter

edith erfling

(See attached file: secountylist.wpd)

COUNTY-BY-COUNTY LISTING LISTED/CANDIDATE SPECIES AND SPECIES OF CONCERN WITHIN CLEAR LAKE OFFICE AREA OF RESPONSIBILITY

(MARCH 2001)

 $E \ = \ Federally \ listed \ as \ endangered$

T = Federally listed as threatened

H = historical occurrence only

M = migrant only

N = nesting activity

W = winter concentration

*C = candidate species: sufficient information exists to support listing

*SOC=species of concern: further biological information is needed to resolve their conservation status *Species which have no legal status and receive no protection under the Endangered Species Act. They are identified for project planning purposes only and to alert you to the possibility that they may be proposed for listing at some future time.

r		grand project planning			
purposes only	y and to alert you to the possibility that they may be proposed for li	sting at some future time.			
ANGEL	INA COUNTY				
Т	BALD EAGLE (N) + (W) Haliaeetus leucocephalus				
${f E}$	RED-COCKADED WOODPECKER	Picoides borealis			
SOC	bog coneflower	Rudbeckia scabrifolia			
SOC	Drummond's yellow-eyed grass	Xyris drummondii			
SOC	rough-leaf yellow-eyed grass	Xyris scabrifolia			
SOC	slender gay-feather	Liatris tenuis			
SOC	Texas heelsplitter	Potamilus amphichaenus			
C	LOUISIANA PINE SNAKE	Pituophis melanoleucus ruthyeni			
AUSTIN	COUNTY				
${f E}$	HOUSTON TOAD	Bufo houstonensis			
${f E}$	ATTWATER'S GREATER PRAIRIE-CHICKEN	Tympanuchus cupido attwateri			
T	BALD EAGLE (M)	Haliaeetus leucocephalus			
BRAZORIA COUNTY					
T	BALD EAGLE (N)	Haliaeetus leucocephalus			
${f E}$	BROWN PELICAN (N)	Pelecanus occidentalis			
T	PIPING PLOVER (W)	Charadrius melodus			
T	GREEN SEA TURTLE	Chelonia mydas			
${f E}$	KEMP'S RIDLEY SEA TURTLE	Lepidochelys kempii			
T	LOGGERHEAD SEA TURTLE	Caretta caretta			
SOC	Texas windmill-grass	Chloris texensis			
SOC	Texas diamondback terrapin	Malaclemys terrapin littoralis			
SOC	southeastern snowy plover	Charadrius alexandrinus tenuirostris			
SOC	reddish egret	Egretta rufescens			
CHAMBERS COUNTY					
T	BALD EAGLE (N)	Haliaeetus leucocephalus			
\mathbf{E}	BROWN PELICAN	Pelecanus occidentalis			
T	PIPING PLOVER (W)	Charadrius melodus			
T	GREEN SEA TURTLE	Chelonia mydas			
${f E}$	KEMP'S RIDLEY SEA TURTLE	Lepidochelys kempii			
T	LOGGERHEAD SEA TURTLE	Caretta caretta			
SOC	Texas windmill-grass	Chloris texensis			
SOC	Texas diamondback terrapin	Malaclemys terrapin littoralis			
SOC	southeastern snowy plover	Charadrius alexandrinus tenuirostris			

COLORA	DO COUNTY		
${f E}$	HOUSTON TOAD	Bufo houstonensis	
\mathbf{E}	ATTWATER'S GREATER PRAIRIE-CHICKEN	Tympanuchus cupido attwateri	
T	BALD EAGLE (N) + (W) Haliaeetus leucocephalus		
FAYETTI	E COUNTY		
T	BALD EAGLE (N)	Haliaeetus leucocephalus	
FORT BI	END COUNTY	<u> </u>	
E	PRAIRIE DAWN	Hymenoxys texana	
T	BALD EAGLE (N)	Haliaeetus leucocephalus	
	TON COUNTY	22 and the state of the state o	
E	ATTWATER'S GREATER PRAIRIE-CHICKEN	Tympanuchus cupido attwateri	
E	BROWN PELICAN	Pelecanus occidentalis	
T	PIPING PLOVER (W)	Charadrius melodus	
T	GREEN SEA TURTLE	Chelonia mydas	
E	KEMP'S RIDLEY SEA TURTLE	Lepidochelys kempii	
T	LOGGERHEAD SEA TURTLE	Caretta caretta	
SOC	Texas windmill-grass	Chloris texensis	
SOC	Houston machaeranthera	Machaeranthera aurea	
SOC	Texas diamondback terrapin	Malaclemys terrapin littoralis	
SOC	southeastern snowy plover	Charadrius alexandrinus tenuirostris	
SOC	reddish egret	Egretta rufescens	
	COUNTY	251 cua rajescens	
	TEXAS TRAILING PHLOX	Phlox nivalis var. texensis	
E	BALD EAGLE (M)		
T	RED-COCKADED WOODPECKER	Haliaeetus leucocephalus Picoides borealis	
E SOC			
SOC	white firewheel (= white blanket-flower) paddlefish	Gaillardia aestivalis var. winkleri Polyodon spathula	
	COUNTY	1 oryonon spainuta	
	PRAIRIE DAWN	T Y 4	
E		Hymenoxys texana	
T	BALD EAGLE (N) + (W)	Haliaeetus leucocephalus	
SOC	Texas windmill-grass	Chloris texensis	
SOC	Houston machaeranthera	Machaeranthera aurea	
	ON COUNTY		
T	BALD EAGLE (W)	Haliaeetus leucocephalus	
E	RED-COCKADED WOODPECKER	Picoides borealis	
C	NECHES RIVER ROSE-MALLOW	Hibiscus dasycalyx	
SOC	Texas heelsplitter	Potamilus amphichaenus	
JASPER			
\mathbf{E}	NAVASOTA LADIES'-TRESSES	Spiranthes parksii	
T	BALD EAGLE (N)	Haliaeetus leucocephalus	
\mathbf{E}	RED-COCKADED WOODPECKER	Picoides borealis	
SOC	bog coneflower	Rudbeckia scabrifolia	
SOC	Drummond's yellow-eyed grass	Xyriş drummondii	
SOC	rough-leaf yellow-eyed grass	Xyris scabrifolia	
SOC	slender gay-feather	Liatris tenuis	
SOC	tiny bog-buttons	Lachnocaulon digynum	
SOC	Texas heelsplitter	Potamilus amphichaenus	
SOC	paddlefish	Polyodon spathula	
<u>C</u>	LOUISIANA PINE SNAKE	Pituophis melanoleucus ruthveni	

E	BROWN PELICAN	Pelecanus occidentalis	
T	GREEN SEA TURTLE	Chelonia mydas	
E	KEMP'S RIDLEY SEA TURTLE	Lepidochelys kempii	
T	LOGGERHEAD SEA TURTLE	Caretta caretta	
SOC	paddlefish	Polyodon spathula	
	Y COUNTY	Totyouor spaniau	
	BALD EAGLE (N)	Haliacetus leuces en la leuc	
T	RED-COCKADED WOODPECKER	Haliaeetus leucocephalus Picoides borealis	
E SOC	paddlefish	Polyodon spathula	
	ORDA COUNTY	1 oiyodon spainuid	
		Halianatus Innanan kalus	
T	BALD EAGLE (N)	Haliaeetus leucocephalus	
E	BROWN PELICAN (N)	Pelecanus occidentalis	
T	PIPING PLOVER (W)	Charadrius melodus	
T	GREEN SEA TURTLE	Chelonia mydas	
E	KEMP'S RIDLEY SEA TURTLE	Lepidochelys kempii	
T	LOGGERHEAD SEA TURTLE	Caretta caretta	
SOC	Texas diamondback terrapin	Malaclemys terrapin littoralis	
SOC	Texas horned lizard	Phrynosoma cornutum	
SOC	southeastern snowy plover	Charadrius alexandrinus tenuirostris	
SOC	reddish egret	Egretta rufescens	
MONTG	OMERY COUNTY		
T	BALD EAGLE $(N) + (W)$	Haliaeetus leucocephalus	
E	RED-COCKADED WOODPECKER	Picoides borealis	
NACOG	DOCHES COUNTY (Angelina National Fo	rest only)	
T	BALD EAGLE (W) (N outside ANF)	Haliaeetus leucocephalus	
\mathbf{E}	RED-COCKADED WOODPECKER	Picoides borealis	
C	TEXAS GOLDEN GLADECRESS (introduced)	Leavenworthia texana	
NEWTO	N COUNTY		
T	BALD EAGLE $(N) + (W)$	Haliaeetus leucocephalus	
\mathbf{E}	RED-COCKADED WOODPECKER	Picoides borealis	
T	LOUISIANA BLACK BEAR (H)	Ursus americanus luteolus	
SOC	bog coneflower	Rudbeckia scabrifolia	
SOC	Drummond's yellow-eyed grass	Xyris drummondii	
SOC	rough-leaf yellow-eyed grass	Xyris scabrifolia	
SOC	slender gay-feather	Liatris tenuis	
SOC	tiny bog-buttons	Lachnocaulon digynum	
SOC	paddlefish	Polyodon spathula	
\mathbf{C}	LOUISIANA PINE SNAKE	<u>Pituophis</u> melanoleucus ruthveni	
ORANG			
T	BALD EAGLE (M)	Haliaeetus leucocephalus	
SOC	paddlefish	Polyodon spathula	
	COUNTY	2 orly out of the state of the	
E	TEXAS TRAILING PHLOX	Phlax nivalis var. texensis	
T	BALD EAGLE (N) + (W)	Haliaeetus leucocephalus	
E	RED-COCKADED WOODPECKER	Picoides borealis	
	paddlefish	Polyodon spathula	
<u>SOC</u>	paudiciisii	1 отубион хритиш	

T LOUISIANA BLACK BEAR (H) SOC bog coneflower COUSTINE COUNTY E WHITE BLADERPOD T BALD EAGLE (N) + (W) E RED-COCKADED WOODPECKER SAN JACINTO COUNTY T BALD EAGLE (N) + (W) E RED-COCKADED WOODPECKER T BALD EAGLE (N) + (W) E RED-COCKADED WOODPECKER T BALD EAGLE (N) + (W) E RED-COCKADED WOODPECKER T BALD EAGLE (N) + (W) E RED-COCKADED WOODPECKER T BALD EAGLE (N) + (W) E RED-COCKADED WOODPECKER T BALD EAGLE (N) + (W) E RED-COCKADED WOODPECKER T BALD EAGLE (N) + (W) E RED-COCKADED WOODPECKER T BALD EAGLE (N) + (W) E RED-COCKADED WOODPECKER T BALD EAGLE (N) + (W) E RED-COCKADED WOODPECKER T BALD EAGLE (N) + (W) E RED-COCKADED WOODPECKER T BALD EAGLE (N) + (W) E RED-COCKADED WOODPECKER T LOUISIANA BLACK BEAR (H) TRINITY COUNTY T BALD EAGLE (N) + (W) E RED-COCKADED WOODPECKER T LOUISIANA BLACK BEAR (H) TRINITY COUNTY T BALD EAGLE (N) + (W) E RED-COCKADED WOODPECKER T BALD EAGLE (N) + (W) E RED-COCKADED WOODPECKER T LOUISIANA BLACK BEAR (H) TRINITY COUNTY T BALD EAGLE (N) + (W) E RED-COCKADED WOODPECKER C NECHIES RIVER ROSE-MALLOW BALD EAGLE (N) + (W) E RED-COCKADED WOODPECKER T EXAS TRAILING PHLOX T BALD EAGLE (N) E RED-COCKADED WOODPECKER T EXAS TRAILING PHLOX T BALD EAGLE (N) E RED-COCKADED WOODPECKER T EXAS TRAILING PHLOX T BALD EAGLE (N) E RED-COCKADED WOODPECKER Plooides borealis Litaris tenuis SOC Texas heelsplitter Potamilus amphichaenus Potamilus accephalus E RED-C	E	RED-COCKADED WOODPECKER	Picoides borealis		
SOC bog coneflower SOC rough-leaf yellow-eyed grass SOC slender gay-feather SOC southern lady's-slipper C TEXAS GOLDEN GLADECRESS (H) C LOUISIANA PINE SNAKE C LOUISIANA PINE SNAKE SOC SOUTHER BALD EAGLE (N) + (W) E RED-COCKADED WOODPECKER SOC SOUTHERN BALD EAGLE (N) + (W) F RED-COCKADED WOODPECKER SOC SOUTHERN BALD EAGLE (N) + (W) F RED-COCKADED WOODPECKER SOC SOUTHERN BALD EAGLE (N) + (W) F RED-COCKADED WOODPECKER SOC SOUTHERN BALD EAGLE (N) + (W) F RED-COCKADED WOODPECKER SOC SOUTHERN BALD EAGLE (N) + (W) F RED-COCKADED WOODPECKER SOC SOUTHERN BALD EAGLE (N) + (W) F RED-COCKADED WOODPECKER F RED-COCKADED WO					
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, , , , , , , , , , , , , , , , , , ,	WALLER COUNTY				
•	T	BALD EAGLE (M)	Haliaeetus leucocephalus		
SOC Texas (Houston) meadow-rue Thalictrum texanum	SOC	Texas (Houston) meadow-rue	Thalictrum texanum		
WHARTON COUNTY					
T BALD EAGLE (N) Haliaeetus leucocephalus	T	BALD EAGLE (N)	Haliaeetus leucocephalus		

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An employee-owned company

22 March 2001

Ms. Edith Erfling U.S. Fish and Wildlife Service 17629 El Camino Real, Ste. 211 Houston, TX 77058-3051

PBS&J Job No. 440622

RE: Shoal Point Container Terminal Project - Request for information on Endangered and Threatened Species

Dear Ms. Erfling:

PBS&J is in the process of preparing an Environmental Impact Statement (EIS) for the U.S. Army Corps of Engineers (USACE) for the proposed Shoal Point Container Terminal. As part of the preparation of the EIS, the NEPA process includes the consideration of all reasonable alternatives. The alternative analysis initially identified a study area of potential alternative sites (See enclosed map). Within the geographic outline, six alternate sites have been identified for more rigorous study. They include Cedar Point, Spilmans Island, Alexander Island, Bayport, Shoal Point, and Pelican Island. This includes areas in Harris, Galveston and Chambers counties.

PBS&J is currently collecting and evaluating environmental data for the study area. Could you please send a list of the federally-listed species that you think should be addressed in the EIS?

Moni DeVora (USFWS) may also be a good source of information for you regarding this project because she is a member of the workgroup that is concerned with Dredged Material Management (DMM).

Thank you for your time. If you have any questions, please contact me at (512) 327-6840, ext. 2259 or by email (kbcalnan@pbsj.com).

Regards,

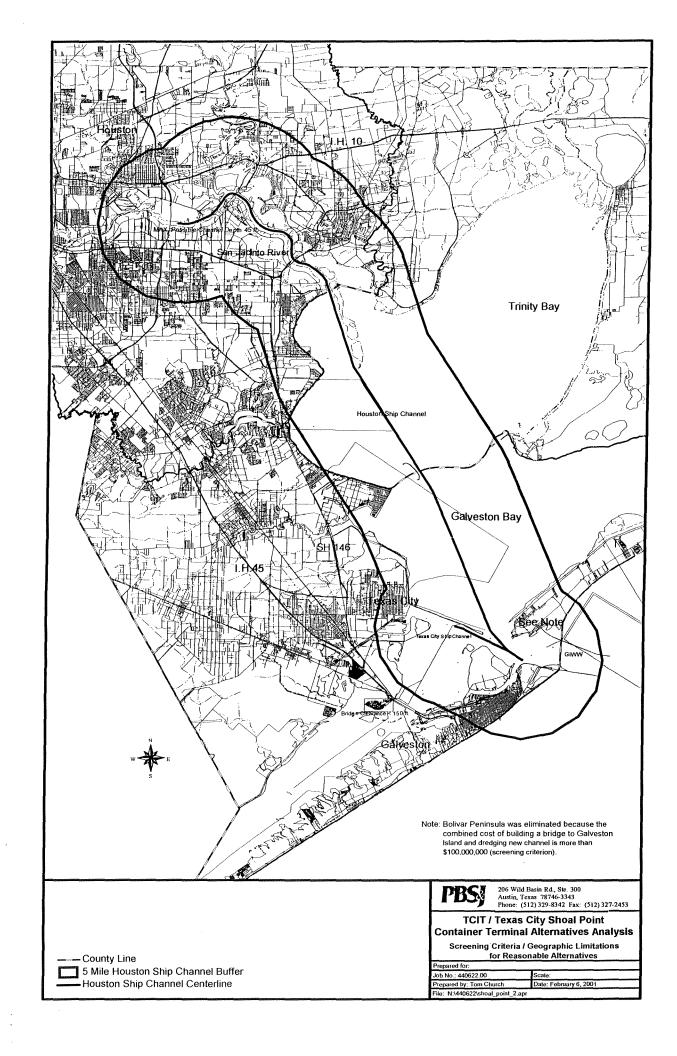
Kathy CalNau Kathy Calnan, Staff Ecologist

Cc: Cecilia Green (PBS&J)

Martin Arhelger (PBS&J)

Moni DeVora (USFWS)

Enclosure



APPENDIX H-9

CORRESPONDENCE REGARDING AIR QUALITY AND GENERAL CONFORMITY DETERMINATION



Houston-Galveston Area Council

PO Box 22777 • 3555 Timmons • Houston, Texas 77227-2777 • 713/627-3200

November 13, 2001

Colonel Leonard D. Waterworth Commander and District Engineer U.S. Army Corps of Engineers Galveston District P.O. Box 1229 Galveston, TX 77553-1229

RE: Inclusion of Shoal Point Container Terminal in Regional Metropolitan Transportation Plan

Dear Colonel Waterworth:

At the request of U.S. EPA Region 6, I am formally communicating to you that on-road vehicular travel associated with the proposed Shoal Point Container Terminal to be located near Texas City, Texas is accounted for in the region's currently approved MTP and associated conformity analysis. Vision 2022, the MTP for the Houston-Galveston Region was adopted by the Transportation Policy Council in April 2000 and the associated conformity analysis was approved by Federal Highway Administration in May of 2000.

The analyses conducted in support of the development of the MTP did include an assumption that a container terminal would be in operation at Shoal Point. The conformity analysis was performed in 1999 and used the latest available information about the Port's proposed truck-related operations. However, the subsequent EIS projects more truck activity than assumed in the conformity determination.

As compared to the assumptions in the current conformity determination, the EIS analysis of Shoal Point assumes that the container terminal would an additional 0.3% more truck trips to the region by 2007 and 0.6% more truck trips by 2022. As the NOx emissions estimate contained in the MTP conformity analysis were 10% and 35% lower than the Rate-of-Progress (ROP) SIP NOx budget in the years 2007 and 2022, respectively, the additional truck trips contained in the EIS would be highly unlikely to result in emissions exceeding conformity budgets.

H-GAC's travel demand analyses do not include activity associated with the construction of specific transportation improvements, as the timing and scope of this activity is not usually known and is a temporary condition. Should you have any questions regarding the analysis conducted or need further information, please contact me at 713-993-4585 or Andy Mullins at 713-993-4587.

Sincerely,

Alan C. Clark MPO Director



Colonel Leonard D. Waterworth November 14, 2001 Page 2

cc: Ms. Sharon Tirpak, US Army Corps of Engineers, Galveston District

Mr. Jahanbakhsh Behnam, US Environmental Protection Agency Region 6

Mr. Andy Mullins, Houston-Galveston Area Council

Mr. Ruben I. Velasquez, P.E., PBS&J

Robert J. Huston, *Chairman*R. B. "Ralph" Marquez, *Commissioner*Kathleen Hartnett White, *Commissioner*Jeffrey A. Saitas, *Executive Director*



TEXAS NATURAL RESOURCE CONSERVATION COMMISSION

Protecting Texas by Reducing and Preventing Pollution
December 21, 2001

Colonel Leonard D. Waterworth Commander and District Engineer U.S. Army Corps of Engineers Galveston District P.O. Box 1229 Galveston, TX 77553-1229

Re: Shoal Point Container Terminal – General Conformity/State Implementation Plan (SIP) Construction Emissions Inventory

Dear Colonel Waterworth:

This letter is in response to a request for emissions inventory information to assist in the analysis of the air quality impacts from the proposed construction of the Shoal Point Container Terminal in Texas City. If, as expected, construction activity at the Shoal Point Container Terminal project generates emissions above the de minimis level of 25 tons per year of nitrogen oxides (NO_x) which is applicable in the Houston area, then a general conformity determination for the project must be performed by the Army Corps of Engineers, as required by the federal Clean Air Act Amendments of 1990.

The construction inventory is a subcategory of the broader category of "area and non road sources" contained in the applicable SIP. Estimates of construction emissions are based on a number of assumptions about population growth, economic activity, the phase in of Tier I and Tier II engines, and cleaner fuels, to name a few, rather than empirically based with the benefit of perfect knowledge about all the possible contributors of nitrogen oxides in the Houston area.

The 2000 SIP for the Houston/Galveston nonattainment, approved in October 2001, includes a construction inventory of 5.5 tons per day or 1,512.2 tons per year for volatile organic compound and 32.1 tons per day or 8,827.5 tons per year for NO_x. This inventory is based in part on the assumption that the most technologically advanced equipment (that is to say the cleanest) available would be in wide spread use. Therefore, any analysis must at least demonstrate it is consistent with this assumption.

Colonel Waterworth

Page 2

Please let Bruce Uphaus of my staff know if you need anything further from us on this matter. He can be reached at (512) 239-4528.

Sincerely,

Jeffrey A. Saitas, P.E., Executive Director Texas Natural Resource Conservation Commission.

Ms. Sharon Tirpak, U.S. Army Corps of Engineers, Galveston District cc:

Mr. Jahanbakhsh Behnam, U.S. Environmental Protection Agency Region 6

Mr. Ruben I. Velasquez, P.E., Post, Buckley, Schun & Jernigan



CARLOS GARZA Mayor

OFFICE OF THE MAYOR

August 30, 2002

Mr. Jeffrey A. Saitas, P.E. Executive Director Texas Natural Resource Conservation Commission P.O. Box 13087 Austin, TX 78711-3087

Re: TEXAS CITY'S PROPOSED SHOAL POINT CONTAINER TERMINAL

Dear Mr. Saitas:

Pursuant to your comment letter dated March 18, 2002 to Ms. Sharon Manzella Tirpak, U.S. Army Corps of Engineers, regarding the Environmental Impact Study of the referenced project, we are pleased to respond as follows:

- 1. The Shoal Point Container Terminal project sponsors (City of Texas City) and the investors (Texas City International Terminal) will maximize shore power electric dredge during the construction of the project and utilize diesel generator power dredge only as necessary and only between the October 31st to April 1st time frame of each year.
- 2. The project sponsors will require the use of low NOx emissions technology on land based diesel construction equipment. Construction contracts governing work occurring in calendar year 2005 and beyond will include language to require Tier 2/Tier 3 diesel equipment and add-on Nox control technologies, or more stringent requirements that might be in place at the time of construction. Contract documents will require contractors to apply for the SB5 grant (or equivalent) to modify or purchase diesel equipment with low NOx diesel emissions technology. Compliance with this requirement and/or efforts to seek other funding for this purpose and/or efforts to reduce NOx emissions by other technologies or methodologies will be used as evaluation criteria in selecting contractors.
- 3. The project sponsors will direct through language contained in lease agreements or other contractual documents, all owners, tenants and/or operators of the Shoal Point facilities to exercise Best Management Practices relative to complying with

Mr. Jeffrey A. Saitas, P.E. August 28, 2002

the National Air Quality Standards and implementing the latest NOx control technologies. Attachment "1" is a list of BMP's proposed for implementation by TCIT. Additional BMP's may be considered and implemented in the future.

If you have any questions or comments, please feel free to contact my office.

Sincerely,

Mayor

CC:

Ms. Sharon Manzella Tirpak Project Manager U.S. Army Corps of Engineers P.O. Box 1229 Galveston, TX 77553-1229

Mr. William L. Allen, P.E., S.E. BERGER/ABAM Engineers, Inc. 33301 Ninth Avenue South, Suite 300 Federal Way, WA 98003-2600

Mr. Alex Parkman SS of A Texas City International Terminal 928 · 5th Avenue North Texas City, TX 77590

Mr. Douglas Houver Executive Director of Management Services City of Texas City

Attachment 1

TEXAS CITY INTERNATIONAL TERMINAL SHOAL POINT

Texas City, Texas
Air Quality Best Management Practices

- 1. Vessel speeds entering the Texas City Ship Channel will be less than 10 knots.
- Vessels will shut down main propulsion engines while at berth (unless necessary to maintain maneuverability or to comply with Coast Guard or other agency requirements).
- 3. Vessel will minimize the use of alternative engines while at borth.
- 4. Vessel auxiliary engines will use reformulated diesel fuel.
- 5. Tugboats assisting vessels will be equipped with engines that meet or exceed US EPA Tier II standards for "New Marine Compression Ignited Engines at or above >37 kW" unless such tugs are unavailable or impracticable.
- 6. Idling time for both vessels and terminal vehicles, including trucks picking up or delivering containers will be minimized. This will be accomplished by minimizing the turnaround time for pick up and delivery of containers.
- 7. Use the cleanest fuel available in all terminal vehicles.
- 8. Utilize electric driven terminal vehicles and cargo handling equipment where possible.
- 9. Utilize vehicles and equipment equipped with alternative fueled engines.
- 10. Continue to research for emerging technologies and methodologies for reducing NOx emissions.
- 11. Require all subcontractors operating at the terminal to comply with these practices.
- 12. Achieve ISO 14001 International Standard of Environmental Management.

Robert J. Huston, *Chairman*R. B. "Ralph" Marquez, *Commissioner*Kathleen Hartnett White, *Commissioner*Jeffrey A. Saitas, *Executive Director*



TEXAS NATURAL RESOURCE CONSERVATION COMMISSION

Protecting Texas by Reducing and Preventing Pollution September 9, 2002

Ms. Sharon Manzella Tirpak Galveston District U.S.Army Corps of Engineers P.O.Box 1229 Galveston, TX 77553-1229

Re: Conditional General Conformity Certification for Proposed Shoal Point Container Terminal

Dear Ms. Tirpak:

Over the past several months, the Texas Commission on Environmental Quality (TCEQ) has been working with project sponsors, local government, and various consultants to address the issues and concerns arising from the Draft Environmental Impact Statement, detailed in our letter to you, dated March 18, 2002. Based upon new information and commitments, the TCEQ can now provide a conditional agreement with the Draft General Conformity Determination published by the U.S. Army Corps of Engineers in January 2002.

In TCEQ's review of this project, we considered the ratio of anticipated peak annual construction and operating emissions to total existing county emissions and commitments made by the project sponsors (City of Texas City) and the investors (Texas City International Terminal), outlined in a letter from Texas City Mayor Carlos Garza, dated August 30, 2002, to:

- Maximize shore power electric dredge during the construction of the project and utilize diesel generator power dredge only as necessary and only between October 31st to April 1st time frame of each year;
- Include language in construction contract documents to require contractors to apply for the SB5 grant (or equivalent) towards the use of low nitrogen oxide (NO_x) diesel equipment;
- Include language in construction contracts governing work in calender year 2005 and beyond to require Tier 2/Tier 3 diesel equipment and add-on NO_x control technologies, or more stringent requirements that might be in place at the time of construction; and
- Direct through language contained in lease agreements and/or other contractual documents, all owners, tenants and/or operators of the proposed facilities to exercise Best Management Practices (BMPs) relative to complying with the National Ambient Air Quality Standards. As a start point; owners, tenants and/or operators will utilize the draft working list of BMPs developed by project proponents.

Ms. Sharon Manzella Tirpak Page 2

Based upon all of these factors, the TCEQ certifies pursuant to 30 Tex. Admin. Code 101.30(h)(1)(E)(i)(I) and federal law that construction emissions from the proposed project are accounted for in the applicable State Implementation Plan. This certification is based upon information provided to date and is conditional upon the completion of a Final Environmental Impact Statement that does not contain changes to air emissions estimates or other sections providing the basis for this certification.

If you require further assistance on this matter, please contact Eve Hou of my staff at (512) 239-5838. Thank you for your cooperation.

Sincerely,

Jeffrey A. Sayas, P.E., Executive Director

Texas Commission on Environmental Quality

Robert J. Huston, *Chairman*R. B. "Ralph" Marquez, *Commissioner*Kathleen Hartnett White, *Commissioner*Jeffrey A. Saitas, *Executive Director*



TEXAS NATURAL RESOURCE CONSERVATION COMMISSION

Protecting Texas by Reducing and Preventing Pollution September 16, 2002

Ms. Sharon Manzella Tirpak Galveston District U.S.Army Corps of Engineers P.O.Box 1229 Galveston, TX 77553-1229

Re: EPA's Detailed Comments on the Draft Environmental Impact Statement for City of Texas City's Proposed Shoal Point Container Terminal

Dear Ms. Tirpak:

At your request, the Texas Commission on Environmental Quality (TCEQ) is responding to comments made by the Environmental Protection Agency (EPA) in its Detailed Comments on the Proposed Shoal Point Container Terminal Draft Environmental Impact Statement (DEIS). The EPA expressed concerns regarding the level of operational emissions that will occur in the future due to the construction of both the Shoal Point and Bayport Container Terminal projects. Specifically, the EPA requires verification that these proposed projects are consistent with the Houston/Galveston Nonattainment Area (HGA) State Implementation Plan (SIP).

The TCEQ confirms that secondary emissions resulting from growth in the region expected to occur as a result of both proposed projects have been accounted for in the HGA SIP. These emissions are inventoried in the vessel emissions inventory, non-road mobile emission inventory, and mobile emissions inventory.

The December 2000 HGA SIP contains a thorough Houston/Galveston area vessel emissions inventory (see http://www.tnrcc.state.tx.us/oprd/rule_lib/hga-appc.zip). This inventory included a 5% per year nitrogen oxide (NO_x) emissions growth from container ships, due to a near-doubling of ship calls from 579 in 1997 to 1,029 in 2007. This 5% growth rate concurs with a study cited in the proponent's DEIS that estimated the rate of growth in demand for container facilities to be on the order of 4-6% per year between 1998 and 2028. The SIP therefore takes into account growth of vessel emissions from increased container traffic to the magnitude that demand can support.

Most of the on-shore emissions at container terminals are inventoried as non-road mobile emissions in the SIP. The December 2000 HGA SIP emissions inventory incorporated the results of a very detailed survey of emissions from construction equipment used at port facilities (such as cranes, forklifts etc). Although growth of these emissions is not accounted for on a project-by-project basis, emissions from total non-road mobile sources, *including port facilities*, were grown to 2007 levels in the SIP.

Ms. Sharon Manzella Tirpak Page 2 September 16, 2002

Modelers from the Houston-Galveston Area Council (H-GAC) have verified that secondary growth in truck traffic due to the operation of the proposed container facilities at Shoal Point and Bayport was captured in the Travel Demand Forecast Model, produced by the H-GAC. Data from the Travel Demand Forecast Model was then used as an input by the TCEQ to construct the Mobile Emissions Inventory which was incorporated into the December 2000 HGA SIP. The H-GAC continues to update on-road mobile emissions related to these projects, however, recent adjustments are not significant at the regional level.

The TCEQ will continue to monitor the development of both ports to ensure that emissions do not exceed levels already accounted for in the SIP. If construction emissions and dredging emissions for this project significantly exceed the amount represented in the Final Environmental Impact Statement (FEIS), a new conformity determination may be required pursuant to 30 Tex. Admin. Code 101.30(g)(3).

Finally, the EPA expressed the need for the project sponsors to ensure that mitigation measures contemplated under Senate Bill 5 (SB5) will be implemented regardless of the source of funding. The TCEQ concurs with this requirement. In the event that SB5 fails to procure sufficient funding, the TCEQ expects the project sponsors to show equivalent reductions to those incorporated in the DEIS either through NO_x reduction technologies purchased with other funding sources or by other approved means.

We hope these comments provide the necessary clarification for you to move forward in developing your FEIS for Texas City's proposed Shoal Point Container Terminal.

Sincerely,

Randolph Wood, Deputy Director

Office of Environmental Policy, Analysis, and Assessment

Texas Commission on Environmental Quality

cc: Ruben I. Velasquez, P.E., PBS&J

APPENDIX H-10

INTERIM REPORT OF RESULTS OF CULTURAL RESOURCES REMOTE-SENSING SURVEY



August 29, 2001

Att'n: Mr. Bryan Guevin U.S. Army Corps of Engineers 2000 Fort Point Road Galveston, Texas 77550

RE:

Interim letter report of results from a cultural resources remote-sensing survey of the City of Texas City's proposed Shoal Point Container Terminal; PBS&J Project Number 440622.00. Texas Antiquities Permit No. 2560.

Dear Mr. Guevin:

PBS&J recently completed a remote-sensing survey for the above-referenced project in Galveston Bay. The majority of fieldwork was conducted during the months of April and May 2001. Additional fieldwork was conducted in early August. The remote-sensing survey covered approximately 4500 acres of bay bottom including the proposed berthing areas, turning basin, beneficial use sites and the margins of the Texas City Channel seaward of the proposed turning basin. The survey also included large areas that will not be impacted by the proposed undertaking, including an area adjacent Dollar Point, additional areas (outside of the proposed beneficial use sites) adjacent both Shoal Point and the west side of Pelican Island, and an area north of Shoal Point on the north side of the Texas City Channel. The purpose of the expanded survey areas was to allow room for moving design footprints around to avoid environmental constraints as much as possible.

Instrumentation used for the survey included a Geometrics *G881* cesium magnetometer, a Coda DA75 side-scan sonar data acquisition computer interfaced with an Edgetech DF1000, 500-kHz towfish, an Odom Hydrotrac echo-sounder, and a Satloc differentially corrected Global Positioning System (GPS). The survey was conducted along parallel transects spaced 100 feet (ft) (30 meters [m]) apart. The side-scan sonar was set to image the bottom for a distance of 82 ft (25 m) to either side of the survey path.

RESULTS

A total of eight remote-sensing targets having potential cultural significance (Table 1) were interpreted from the large number of magnetic anomalies and side-scan sonar targets recorded by the remote-sensing survey. Table 1 provides coordinates for the center of each recommended target in both Texas State Plane (SP) and Universal Transverse Mercator (UTM) systems. State Plane coordinates (Texas South Central Zone) are based on the 1983 North American Datum (NAD83) and are expressed in feet. UTM coordinates (Zone 15N) are based on the 1984 World Geodetic System datum and are expressed in meters. The aerial extent of each target corresponds to a circle of the radius specified in Table 1 and centered on the coordinates provided. The Texas Historical Commission requires that potentially significant targets be avoided by at least 50 meters (164 feet) from their edge.

The eight remote-sensing targets listed in Table 1 share characteristics with remote-sensing signatures of documented submerged watercraft. This list includes 5 targets (SP1-SP5) in the Shoal Point survey area, 1 target in the Pelican Island survey area, and 2 targets along the northern margin of the Texas City Channel. Only three of the total eight remote-sensing targets (SP2, PI1 and TCC1) would be potentially affected by the proposed undertaking as described below.

TABLE 1
TARGETS RECOMMENDED FOR AVOIDANCE OR FURTHER INVESTIGATION

REMOTE- SENSING	CENTER POINT NAD83 SP	NAD83 SP	RADIUS (ft)	CENTER POINT UTM	CENTER POINT UTM	RADIUS (m)
_TARGET	EAST (ft)	NORTH (ft)		EAST (m)	NORTH (m)	
SP1	3278756.8	13697939.4	105	316908.4	3248269.6	32
SP2	3283872.4	13698668.6	117	318477.2	3248411.6	36
SP3	3290270.3	13705589.0	128	320533.2	3250418.4	39
SP4	3288002.2	13706819.9	83	319862.0	3250828.6	25
SP5	3287622.7	13706863.1	159	319747.1	3250847.7	48
PI1	3297184.9	13694617.4	144	322466.7	3246970.1	44
TCC1	3303884.0	13702287.0	118	324626.1	3249200.2	36
TCC2	3283776.0	13709028.0	30	318609.9	3251566.9	9

Anomaly SP2 falls beneath the proposed southwestern levee of the southernmost Shoal Point beneficial use area. Anomaly PI1 falls beneath the proposed western levee of the Pelican Island beneficial use area. Dredging would not impact either target, rather both would be buried by the overburden of the levees. There is a potential that significant cultural resources, should they be present, would be impacted by construction of the levees.

Anomaly TCC1 is located from 100 to 200 feet north of the northern channel toe at an elevation of -15 to -20 feet MLT. The existing channel top-of-slope at this location is estimated to be nearly 200 feet north of the toe at an elevation of approximately -15 feet MLT based upon existing channel cross-sections. Slumping may already have impacted anomaly TCC1, since it is located below the present top-of-slope. The proposed deepening may shift the top of slope an additional 25 feet northward, potentially causing the source of Anomaly TCC1 to slump further into the channel. No other potentially significant underwater sites are known or suspected in the vicinity of the proposed undertaking.

SUMMARY AND RECOMMENDATIONS

PBS&J has completed the analysis of all magnetometer and side-scan sonar data from this project. Preparation of a draft technical report of findings is ongoing. Magnetic contour illustrations are planned for the technical report. PBS&J recommends that eight remote-sensing targets (SP1-SP5, PI1 and TCC1-TCC2; Table 1) be avoided by bottom disturbing activities due to the possibility that they may represent significant archaeological sites. All but three of those targets (SP2, PI1 and TCC1) would be unaffected by the proposed undertaking as presently designed; however, all eight should be avoided in the event of future redesigns of the project impact areas.

PBS&J recommends that any target which could be adversely impacted by this project either be avoided by redesigning the project or be investigated further to determine whether a significant cultural resource is present. Further investigation typically involves an underwater assessment of a target by a qualified archaeological diver. A potential alternative to diving involves conducting a close-order remote-sensing survey of a target. A close-order survey would collect data at a higher resolution than the original survey in order to better define the physical characteristics of a target. A close-order survey would determine which targets, if any, require diver investigations to assess historic significance and which appear associated with compact ferrous sources (debris). Diving might still be required on a target following close-order survey; however, it also is possible that the results of such a survey would provide evidence to support changing an original recommendation to one of no significance.

Instrumentation recommended for a close-order survey should include a cesium magnetometer, a 500-kHz side-scan sonar and a differentially corrected GPS. A maximum line spacing of 33 ft (10 m) is recommended for such a survey. Closer line spacing is encouraged for the magnetometer if weather conditions permit, but it is not considered essential to the outcome of the survey. Collection of magnetometer data on crossing lines is encouraged to increase the resolution of the survey. Magnetic data should be contoured for analysis and illustration purposes. The side-scan survey should provide the maximum resolution (lowest range setting) possible with the system used, while ensuring a 50-percent overlap of adjoining sonar swaths.

Should you have any questions, please contact me at 512-329-8342, extension 2028 or by email at blgearhart@pbsj.com.

Sincerely,

Robert L. Gearhart II Principal Investigator

ent Sembonto

APPENDIX H-11

EXAMPLE LETTER CONCERNING CUMULATIVE EFFECTS PROJECTS



25 May 2001

City of Galveston Monica Franke, Dir. of Planning P.O. Box 799 Galveston, TX77553-0779

Re: Shoal Point Container Terminal Environmental Impact Statement – Cumulative Impacts

Dear Ms. Franke:

PBS&J is assisting the U.S. Army Corps of Engineers (USACE), Galveston District, with preparation of an Environmental Impact Statement (EIS) on the City of Texas City's proposed Shoal Point Container Terminal in Texas City. The EIS will include a discussion of the potential cumulative effects of the project. Cumulative effects involve the incremental impact of the action on the environment when added to other past, present, and reasonably foreseeable future actions. In order to address the potential cumulative effects associated with construction and operation of the proposed Shoal Point Container Terminal in the EIS, PBS&J is requesting information from your agency or organization that may assist us in identifying specific planned or permitted activities in the vicinity of the Shoal Point site. The attached map indicates the Area of Influence that has been identified for the cumulative effects assessment. The Year 2025 will be used as the planning horizon. Planned or permitted activities may include, but are not limited to, residential or commercial developments, industrial expansions, transportation projects, pipeline projects, transmission line projects, power plants, wastewater facilities, ports, terminals, or other boat storage/docking facilities.

If you have information regarding planned activities in the Area of Influence, please provide PBS&J with any available details, including the name of the project, the address or approximate location of the project site, the name and address of the project proponent/applicant, a general description of the proposed activity, the approximate size of the proposed project, information regarding any permit application or environmental documentation for the project, etc. If possible, please pinpoint the site on the attached Area of Influence map and return to PBS&J at the address or fax number indicated below.

Please send any information you can provide to PBS&J in the any of the following ways: e-mail address - crgreen@pbsj.com; fax number - (512) 327-2453; or mailing address - PBS&J, 206 Wild Basin Rd., Suite 300, Austin, Texas 78746-3343. In order to ensure that your information reaches the appropriate person at PBS&J, please be sure to address the mailed or faxed information to the attention of Cecilia Green, PBS&J Project Manager.

In order to incorporate this information into the Draft EIS, we are requesting that you respond by

June 8, 2001. We greatly appreciate your attention to this matter. If you need additional information or have any questions about this request, please feel free to contact Cecilia Green at (512) 329-8342 ext. 9628. Thank you for any assistance you are able to provide.

Sincerely,

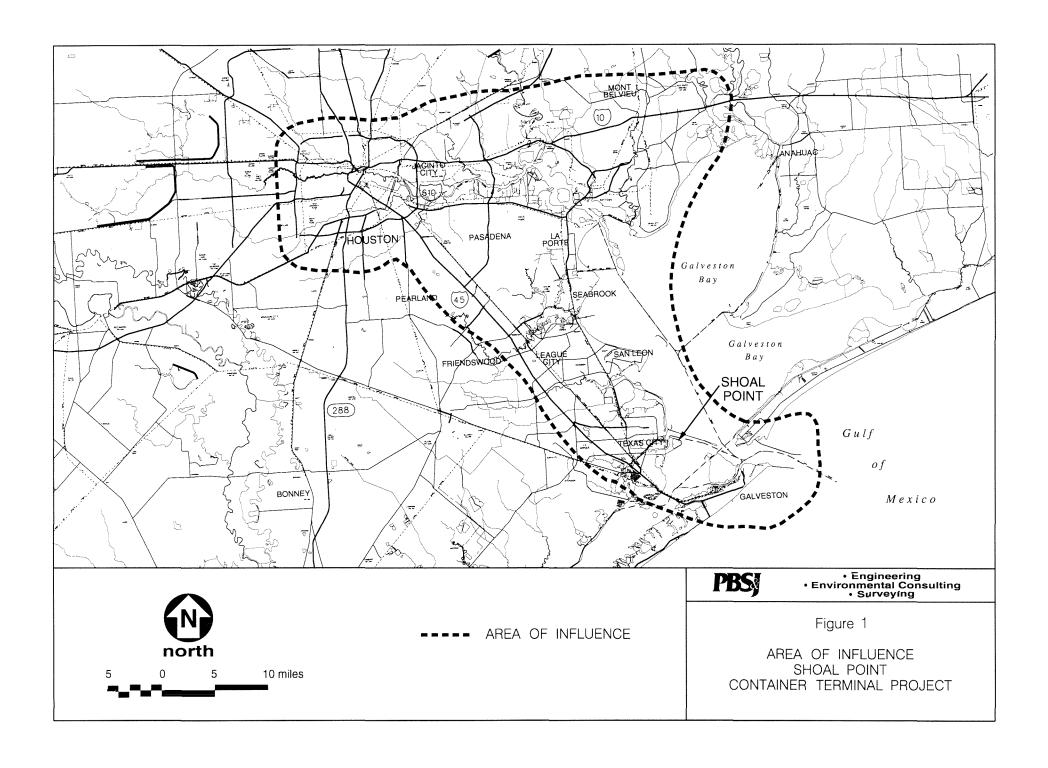
Cecilia Green

Project Manager

Enclosure

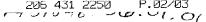
Cc: Sharon Tirpak, U.S. Army Corps of Engineers

Douglas Hoover, City of Texas City



APPENDIX H-12

LETTER FROM U.S. FISH AND WILDLIFE SERVICE REGARDING COMMENTS ON DRAFT DREDGED MATERIAL MANAGEMENT PLAN





United States Department of the Interior FISH AND WILDLIFE SERVICE

Division of Ecological Services 17629 El Camino Real, Suite #211 Houston, Texas 77058-3051 281/286-8282 / (FAX) 281/488-5882



July10, 2001

Mr. Chris Cornell Project Engineer Berger/Abam Engineers Inc 33301 Ninth Avenue South Federal Way, WA 98003-6395

BERGER/ABAM JUL 162001 RECEIVED

Dear Mr. Cornell:

The U.S. Fish and Wildlife Service (USFWS) has reviewed the first draft of the Dredge Material Management Plan (DMMP) for the Shoal Point Container Terminal located in Texas City, Galveston County, Texas.

The Service is concerned with possible impacts to fish and wildlife and their habitat caused by dredging and fill activities associated with the construction of the proposed project. Outlined below according to section number in the draft DMMP are our comments and suggestions.

4.6 Oyster Survey

All oyster reefs should be avoided. If reefs cannot be avoided, then mitigation should be conducted using Powell's "The Status and Long-Term Trends of Oyster Reefs in Galveston Bay, Texas" (enclosed) as a guideline for oyster placement and reef management. In addition, oysters within 1000 feet of the proposed beneficial use sites may be damaged due to siltation and mud flows. The degree of impact will depend on sediment type and the use of water control structures along the BUS levees.

6.4 Beneficial use sites (BUS)

It is very important to maintain a sufficient amount of open water within the sites to replicate natural marsh functions. The current BU sites constructed as part of the Houston Ship Channel project are problematic due to poor circulation of water throughout the created marshes. Circulation can be established by; 1) keeping the sites small and creating more edge (under 200 acres in size), 2) creating open water channels, 3) protecting or creating marsh and circulation channels at existing shorelines; i.e., constructing the site slightly "offshore".

¹Eric N. Powell, Junggeun Song, Matthew S. Ellis, and Elizabeth A. Wilson-Ormond. The Status and Long-Term Trends of Oyster Reefs in Galveston Bay, Texas. *Journal of Shellfish Research*, Vol. 14, No2, 439-457, 1995.

P.03/03

Mr. Chris Cornell Project Engineer DMMP first draft July 10, 2001 Page 2

6.4.1. Swan Lake

The Service recommends swan lake restoration be completed in Phase I. A more detailed plan should be submitted for the construction of marsh within swan lake. The existing marsh habitat as well as the small shell islands located along the east edge should not be adversely impacted.

Part D- Beneficial Use Sites
1. Goals and Objectives

An interagency meeting to discuss the proposed DMMP plan was attended on June 25, 2001 by the Texas Parks and Wildlife Department(TPWD), National Marine Fisheries Service (NMFS), and USFWS. The goals and objectives were reviewed by the agencies, and several changes were discussed. The agencies are continuing to review the goals and objections of the BUS and will provide detailed comments at a later date.

The beneficial use sites must be successfully managed and maintained throughout the life of the project.

Thank you for the opportunity to comment on the first draft for the Dredge Material Management Plan for the Shoal Point Container Terminal. If you need any additional information, please contact me or Moni DeVora at 281/286-8282.

Sincerely

Carlos H. Mendoza

Act

Project Leader, Clear Lake ES Field Office

cc:

U.S. Army Corps of Engineers, Sharon Tirpak, Galveston TX PBS&J, Cecilia Green, Paul Jensen, Austin, TX

APPENDIX H-13

NOTICE OF AVAILABILITY OF DRAFT ENVIRONMENTAL IMPACT STATEMENT

(e.g., permitting electronic submission of responses).

Burden Statement: The estimated burden for Public Notification is approximately: 51,449 responses per year; 748,811 hours per year; and \$4.035 million per year of total cost.

Burden means the total time, effort, or financial resources expended by persons to generate, maintain, retain, or disclose or provide information to or for a Federal agency. This includes the time needed to review instructions; develop, acquire, install, and utilize technology and systems for the purposes of collecting, validating, and verifying information, processing and maintaining information, and disclosing and providing information; adjust the existing ways to comply with any previously applicable instructions and requirements; train personnel to be able to respond to a collection of information; search data sources; complete and review the collection of information; and transmit or otherwise disclose the information. Any recommendations from the drinking water community and the general public on this issue will be given consideration by the Agency.

Dated: December 21, 2001.

William R. Diamond,

Director, Drinking Water Protection Division. [FR Doc. 02–222 Filed 1–3–02; 8:45 am]

BILLING CODE 6560-50-P

ENVIRONMENTAL PROTECTION AGENCY

[FRL-7125-9]

Environmental Laboratory Advisory Board (ELAB), Nominees, Meeting Dates, and Agenda

AGENCY: Environmental Protection

Agency.

ACTION: Notice, correction.

SUMMARY: The Environmental Protection Agency published a document in the Federal Register on November 9, 2001 (66 FR 56675). The Date of the ELAB meeting has been changed. The Environmental Protection Agency (EPA) is soliciting nominees to serve on the **Environmental Laboratory Advisory** Board (ELAB). Nominees are being sought to fill vacancies in the following category: Field Testing. Terms of service will commence upon selection and terminate on July 27, 2003. Application forms must be submitted to provide information on experience, abilities, stakeholder interest, organizational description, and references. A copy of

the application form can be obtained on the Internet (see address below).

The date for the Environmental Laboratory Advisory Board of Directors meeting has been changed to 3 PM to 6 PM on December 4, 2001 and the meetings scheduled on December 6 and 7 have been canceled. The ELAB meeting will be held at the Crystal Gateway Marriott at 1700 Jefferson Davis Highway, Arlington VA. At this meeting the ELAB board will discuss issues, ideas, and opinions previously submitted and time permitting, will take comments and questions from the public. ELAB is soliciting input from the public on issues related to the NELAC environmental laboratory accreditation program and NELAC standards. The agenda of the ELAB December 4 meeting will be based on input gathered from written comments as well as a review of recommendations and activities from earlier Board meetings.

Written comments on NELAC laboratory accreditation and standards are encouraged and should be sent to Edward Kantor DFO, PO Box 93478, Las Vegas NV 89193, or can be faxed to (702) 798–2261 or E-mailed to kantor.edward@epa.gov. ELAB nominee applications can be found at http://www.epa.gov/ttn/nelac/arcmisc.html and should be mailed, faxed, or E-mailed to the addresses previously given.

http://www.epa.gov/ttn/nelac/arcmisc.html

Dated: November 8, 2001.

John G. Lyon,

Director, Environmental Sciences Division, National Environmental Research Laboratory. [FR Doc. 02–221 Filed 1–3–02; 8:45 am]

BILLING CODE 6560-50-P

ENVIRONMENTAL PROTECTION AGENCY

[ER-FRL-6625-2]

Environmental Impact Statements; Notice of Availability

Responsible Agency: Office of Federal Activities, General Information (202) 564–7167 or www.epa.gov/oeca/ofa. Weekly receipt of Environmental Impact Statements Filed December 24, 2001 Through December 28, 2001 Pursuant to 40 CFR 1506.9.

EIS No. 010538, Final EIS, FHW, WI, County Highway J/WIS 164 (I–94 to County E) Corridor Improvements Project, Funding, City of Pewaukee, Villages of Pewaukee and Sussex, Towns of Lisbon, Richfield and Polk, Waukesha and Washington Counties, WI, Wait Period Ends: January 28, 2002, Contact: Richard Madzak (608) 829–7510.

The above FHW EIS should have appeared in the December 28, 2001 Federal Register. The 30-day Wait Period is Calculated from December 28, 2001.

EIS No. 010539, Final EIS, COE, CA, White Slough Flood Control Study, Tidal Circulation Improvements and Section 205 Program Authorities Continuation, Vallejo Sanitation and Flood Control District, City of Vallejo, Solano County, CA, Wait Period Ends: January 28, 2002, Contact: Tamara Terry (415) 977–8545.

The above COE EIS should have appeared in the December 28, 2001 Federal Register. The 30-day Wait Period is Calculated from December 28, 2001.

EIS No. 010540, Draft EIS, FTA, AZ, Central Phoenix/East Valley Light Rail Transit Corridor, Construction, Operation and Maintenance, Funding, Cities of Phoenix, Tempe and Mesa, Maricopa County, AZ, Comment Period Ends: February 19, 2002, Contact: Hymie Luden (415) 744— 3115.

EIS No. 010541, Draft EIS, COE, TX, Texas City's Proposed Shoal Point Container Terminal Project, Containerized Cargo Gateway Development, US Army COE Section 404 and 10 Permits Issuance, Dredged Material Placement Area (DMPA), City of Texas, Galveston County, TX, Comment Period Ends: February 19, 2002, Contact: Sharon Manella Tirpak (409) 766–3931.

EIS No. 010542, Draft Supplement EIS, AFS, MT, Clancy-Unionville Vegetation Manipulation and Travel Management Project, Updated and New Information concerning Cumulative Effects and Introduction of Alternative F, Clancy-Unionville Implementation Area, Helena National Forest, Helena Ranger District, Lewis and Clark and Jefferson Counties, MT, Comment Period Ends: February 19, 2002, Contact: Jerry Meyer (406) 449–5201.

EIS No. 010543, Final EIS, NOA, CA, Goat Canyon Enhancement Project, Sediment Basins, Staging Area and Visual Screening Berm Establishment, Tijuana River National Estuarine Research Reserve (TRNERR), Imperial Beach, City and County of San Diego, CA, Wait Period Ends: February 04, 2002, Contact: Nina Garfield (301) 563-1171.

EIS No. 010544, Final EIS, USA, CA, Oakland Army Base Disposal and Reuse Plan, Implementation, City of Oakland, Alameda County, CA, Wait Period Ends: February 04, 2002, Contact: Theresa Persick Arnold (703) 697–0216.

Dated: December 31, 2001.

Anne Norton Miller,

Director, Office of Federal Activities. [FR Doc. 02–227 Filed 1–3–02; 8:45 am]

BILLING CODE 6560-50-P

ENVIRONMENTAL PROTECTION AGENCY

[ER-FRL-6625-3]

Environmental Impact Statements and Regulations; Availability of EPA Comments

Availability of EPA comments prepared pursuant to the Environmental Review Process (ERP), under Section 309 of the Clean Air Act and Section 102(2)(c) of the National Environmental Policy Act as amended. Requests for copies of EPA comments can be directed to the Office of Federal Activities at (202) 564–7167.

An explanation of the ratings assigned to draft environmental impact statements (EISs) was published in FR dated May 18, 2001 (66 FR 27647).

Draft EISs

ERP No. D–BIA–K39071–00 Rating EC2, Truckee River Water Quality Settlement Agreement and Federal Water Right Acquisition, Implementation, Truckee River, Placer County, CA and Washoe, Storey and Lyon Counties, NV.

Summary: EPA recognized the WQSA signatories work to permanently improve Truckee River water quality and reduce violations of water quality standards. EPA encouraged them to continue to work with us in achieving full compliance with water quality standards. EPA expressed concerns with alternatives, monitoring and mitigation, and cumulative impacts.

ERP No. D–BLM–K40248–AZ Rating EC2, Diamond Bar Road Improvement Project, Road Pavement and Realignment of sections through Grapevine Wash, Right-of-Way Permits Issuance, Mohave County, AZ.

Summary: EPA expressed environmental concerns with potential cumulative impacts, particularly, those from reasonably foreseeable development scenarios. EPA suggested that alternatives further minimize adverse impacts to vegetation, wildlife and cultural resources.

ERP No. D-COE-D36179-WV Rating EO2, Marlington Local Flood Protection, Flood Damage Reduction Measures

Evaluation, Levee and Floodwall Construction for Knapp Creek Flood Management, Greenbrier River, Town of Marlington, Pocahontas County, WV.

Summary: EPA expressed environmental concerns that non-structional alternatives, including relocation of residential and non-residential structures to a flood safe site, were not evaluated in detail. Insufficient information is provided for a reasonably available alternative (relocation) which could reduce the environmental impacts of the proposal.

ERP No. D-NOA-L91016-AK Rating LO, American Fisheries Act Amendments 61/61/13/8: Amendment 61 Groundfish Fishery of the Bering Sea and Aleutian Islands Area; Amendment 61 Groundfish of the Gulf of Alaska; Amendment 13 Bering Sea and Aleutian Islands King and Tanner Crab, and Amendment 8 Scallop Fishery off Alaska, Fishery Management Plans, AK.

Summary: EPA lacked objections to ending the traditional race for fish by implementing action alternatives associated with the American Fisheries Act (AFA) because it results in a safer, more efficient fishery that utilizes a higher percentage of pollock biomass harvested. EPA suggested that the fishing industry could exploit the temporal and spatial discretion afforded by AFA, and extract a greater percentage of biomass to further reduce impacts of process waste discharge to water quality.

ERP No. DS-NRC-A00150-00 Rating EC2, Decommissioning of Nuclear Facilities, Updated Information on Dealing With Decommissioning of Nuclear Power Reactors (NUREG-0586).

Summary: EPA expressed environmental concerns with this supplement to a generic EIS and requested clarifications and supplementary information on: determining when a particular decommissioning activity or site or operating condition is covered by the generic analysis; explaining the differing impact levels and the assumptions used in setting them; updating the analysis of the site's environmental condition; and, providing a more robust discussion of impacts to ground water.

Final EISs

ERP No. F-AFS-L65377-OR, South Fork Burnt River Ranger Planning Area, Development of Five New Allotment Management Plans (AMPS), Wallowa-Whitman National Forest, Unity Ranger District, Baker County, OR.

Summary: While the FEIS added additional technical information on restoration actions, EPA continued to

have some environmental concerns with the project. Principally, the FEIS did not include a no-graze or reduced graze restoration alternative.

ERP No. F-COE-J64008-SD, Title VI Land Transfer South Dakota, Transfer of 91,178 Acres of Land at Lake Oahe, Lake Sharp, Lake Francise Case, and Lewis and Clark Lake, from the US Army Corps of Engineers (USACE) to the South Dakota Department of Game, Fish and Parks (SDGFP), SD.

Summary: No formal comment letter was sent to the preparing agency.

ERP No. F-FHW-F50003-IL, Fox River Bridge Crossings, Construction of up to Five-Bridges across the Fox River, Funding and NPDES and US Army COE Section 10 and 404 Permits Issuance, Kane County, IL.

SUMMARY: Based upon the highway agency's commitments (on travel-related mitigation and wetland compensation), EPA had no significant environmental concerns with the preferred alternative. EPA believed that the preferred alternative can satisfy the project's purpose and need while adequately mitigating direct and indirect impacts.

ERP No. F-FRC-L05221-WA, Cowlitz River Hydroelectric Project (No. 2016– 044), Relicensing of the Existing 462– Megawatt Cowlitz River Hydroelectric Project, City of Tacoma, WA.

Summary: No formal comment letter was sent to the preparing agency.

ERP No. FS-NPS-K61137-AZ, Organ Pipe Cactus National Monument General Management Plan and Development Concept Plan, Updated Information concerning Re-Analysis of Cumulative Effects of the Sonoran Pronghorn Portion of the Sonoran Desert, Pima County, AZ.

Summary: No formal comment letter was sent to the preparing agency.

Dated: December 28, 2001.

Anne Norton Miller,

Director, Office of Federal Activities.
[FR Doc. 02–228 Filed 1–3–02; 8:45 am]
BILLING CODE 6560–50–U

ENVIRONMENTAL PROTECTION AGENCY

[OPP-34225F; FRL-6812-6]

Diazinon; Receipt of Requests for Amendments and Cancellations

AGENCY: Environmental Protection Agency (EPA).

ACTION: Notice.

SUMMARY: Several companies that manufacture diazinon (O,O-diethyl O-(2-isopropyl-6-methyl-4-pyrimidinyl) phosphorothioate) pesticide products

APPENDIX H-14

USACE PUBLIC NOTICE FOR JANUARY 29, 2002, PUBLIC WORKSHOP AND HEARING



Public Notice

U.S	3.	Arm	У	Corp	S
Of	E	ngin	ee	ers	
Gal	VE	eston	D	istric	t

Permit Application No:	21979
Date Issued:	28 December 2001
Comments Due:	18 February 2002

U.S. ARMY CORPS OF ENGINEERS, GALVESTON DISTRICT AND TEXAS NATURAL RESOURCE CONSERVATION COMMISSION

Purpose of Public Notice: To announce and inform you of the release of the Draft Environmental Impact Statement (DEIS), the Draft General Conformity Determination, the permit application, the public comment period and the date and location of the Public Hearing, for the City of Texas City's proposed Shoal Point Container Terminal.

Background: In July 2000, the City of Texas City submitted a Department of Army Permit Application to construct a container terminal on Shoal Point, adjacent to the Texas City Channel and Galveston Bay. The project would include the filling of wetlands and waters of the U. S., dredging and wharf construction. It was determined that an Environmental Impact Statement would be required for the proposed project. Since the October 2000 Scoping Meeting, the consulting firm of PBS&J, under the direction of the Galveston District, Corps of Engineers (Corps), prepared a Draft Environmental Impact Statement for the proposed project. The DEIS is now available for public review and comment. In addition, the revised permit application and project plans are available for review and comment.

Availability of Draft Environmental Impact Statement (DEIS): Pursuant to section 102(2)(C) of the National Environmental Policy Act (NEPA) of 1969, as amended and as implemented by the Council on Environmental Quality (40CFR Parts 1500-1508) a DEIS for the proposed Shoal Point Container Terminal has been filed with the EPA and is being made available to Federal, State and local agencies and all interested parties. The availability of the DEIS will be announced in the Federal Register on January 4, 2002. Copies of the DEIS are available in hard copy or CD format. Hard copies of the Executive Summary are also available. Hard copies of the document are available by contacting Ms. Lisa Putman, PBS&J, 206 Wild Basin Road, Suite 300, Austin, Texas 78746-3343 or by calling (512) 329-8342, ext. 9629. There is a \$ 75.00 charge for the document. Hard copies of the Executive Summary or a CD version of the DEIS are available free of charge and you may obtain them by writing the USACE Galveston District, Attn: Sharon Tirpak, P.O. Box 1229, Galveston Texas 77553 or by calling (409) 766 - 3180. In addition, copies of the DEIS are available for viewing at the following libraries:

Evelyn Meador Branch Library 2400 North Meyer Road Seabrook, Texas 77586 La Porte Public Library 600 S. Broadway La Porte, Texas 77571 Helen Hall Library 100 West Walker St. League City, Texas 77573

Pasadena Public Library Fairmont Branch 4330 Fairmont Parkway Pasadena. Texas 77504

Rosenberg Library 2310 Sealy Avenue Galveston, Texas 77550

Deer Park Public Library 3009 Center Street Deer Park, Texas 77536 Sterling Municipal Library 1 Mary Wilbanks Avenue Baytown, Texas 77520

La Marque Public Library 1011 Bayou Road La Marque, Texas 77568

Moore Memorial Public Library 1701 9th Ave. North Texas City, Texas 77590

Draft General Conformity Review: Pursuant to Section 176 of the Clean Air Act Amendments (CAAA) of 1990, a Draft General Conformity Determination has been filed with the EPA and TNRCC and is being made available to Federal, State and local agencies and all interested parties for the proposed Shoal Point Container Terminal. Hard copies of the Draft Conformity Determination are available free of charge and you may obtain them by writing the USACE Galveston District, Attn: Sharon Tirpak, P.O. Box 1229, Galveston Texas 77553 or by calling (409) 766 - 3180. Copies of the Draft Conformity Determination are available for public viewing, along with the DEIS, at the libraries listed above.

Public Comment and Public Hearing: The USACE Galveston District will be accepting public comment on the DEIS, the Draft Conformity Determination and the permit application through February 18, 2002. All comments must be postmarked by February 18, 2002. You may send written comments to the USACE, Galveston District, Attn: Sharon Tirpak, P.O. Box 1229, Galveston, Texas 77553. If you wish to voice your comments, a Public Hearing is scheduled for Tuesday, January 29th, 2002, at the Charles Doyle Convention Center, 2010 5th Avenue North (21st and Phoenix Lane), Texas City, Texas. A Workshop will precede the hearing. Poster presentations will be available for viewing and project team members will be present to discuss the DEIS. The Workshop will be conducted from 5:00 – 6:30 PM and the formal Hearing will commence at 7:00PM. Additional information on the Workshop and Public Hearing is attached with this notice.

Permit Application: A revised permit application with project plans is attached with this notice and comments on the application will be accepted through February 18, 2002. You may submit written comments to the address stated above or you may voice your comments at the Public Hearing scheduled for January 29th, 2002, in Texas City (details stated above). All comments must be postmarked by February 18, 2002.

Authority: This application will be reviewed pursuant to Section 10 of the Rivers and Harbors Act of 1899 and Section 404 of the Clean Water Act.

Applicant:

City of Texas City P.O. Box 2608

Texas City, Texas 77592

Telephone: (409) 643-5927

POC: Doug Hoover

Location: The project is located at Shoal Point, an active dredge material placement area, adjacent to the Texas City Channel and Galveston Bay, in Texas City, Galveston County, Texas. The project can be located on the U.S.G.S. quadrangle map entitled Virginia Point, Texas. Approximate UTM Coordinates: Zone 15; Easting: 317500; Northing: 3250600.

Project Description: The City proposes to construct a 6-berth marine container terminal on approximately 400 acres of an active, leveed dredge material placement area, known as Shoal Point. The project would require the construction of a container yard, access roadway, wharves, berthing area and turning basin. In addition, the proposal includes deepening the Texas City Channel to -45 feet MLT. Eleven million cubic yards of material would be dredged from the channel, proposed wharf area and turning basin. Surface area for project dredging is approximately 650.9 acres. Approximately 13.34 acres of inter-tidal wetlands and 9.7 acres of open water would be filled during construction of the container yard and access roadway. In addition, to compensate for the lost dredged material disposal capacity on Shoal Point approximately 357 acres of open water would be filled for the construction of beneficial use site 1 (ultimately for the creation of inter-tidal marsh). The project would be constructed in three phases. Phase I includes the construction of an access roadway, a 125-acre container yard and two berths with associated dredging. Phase II includes the construction of a 125-acre container yard, two berths and turning basin with associated dredging and the deepening of the channel. Phase III includes the construction of a 150-acre container yard and two berths with associated dredging. Construction of the 6-berth terminal would be completed by 2016. As mitigation for wetland impacts the applicant is proposing to construct 45 acres of inter-tidal marsh in the northern portion of Swan Lake, adjacent to the project site.

Other Agency Authorizations: Texas Coastal Zone consistency certification is required. The applicant has stated that the project is consistent with the Texas Coastal Management Program goals and policies and will be conducted in a manner consistent with said Program.

State Water Quality Qualifications: This project would result in a direct impact of greater than three acres of waters of the state or 1500 linear feet of streams (or a combination of the two is above the threshold), and as such would not fulfill Tier I criteria for the project. Therefore, Texas Natural Resource Conservation Commission (TNRCC) certification is required. Concurrent with U.S. Army Corps of Engineers (Corps) processing of this application, the TNRCC is reviewing this application under Section 401 of the CWA and in accordance with Title 30, Texas Administrative Code Section 279.1-13 to determine if the work would comply with State water quality standards. By virtue of an agreement between the Corps and the TNRCC, this public notice is also issued for the purpose of advising all known interested persons that there is pending before the TNRCC a decision on water quality certification under such act. Any comments concerning this application may be submitted to the Texas Natural Resource Conservation Commission, 401 Coordinator, MSC-150, P.O. Box 13087, Austin, Texas 78711-3087. The public comment period extends 30 days from the date of publication of this notice. A copy of the public notice with a description of work is made available for review in the TNRCC's Austin office. The complete application may be reviewed in the Corps office. The TNRCC may conduct a public hearing to consider all comments concerning water quality if requested in writing. A request for a public hearing must contain the following information: the name, mailing address, application number, or other recognizable reference to the application; a brief

description of the interest of the requester, or of persons represented by the requester; and a brief description of how the application, if granted, would adversely affect such interest.

National Register of Historic Places: The staff archaeologist has reviewed the latest published version of the National Register of Historic Places, lists of properties determined eligible, and other sources of information. The following is current knowledge of the presence or absence of historic properties and the effects of the undertaking upon these properties: A remote sensing survey of the Shoal Point location was performed by PBS&J in April and May 2001. A total of eight anomalies having potential historical significance were located during that inventory. All eight anomalies should be avoided by bottom disturbing activities due to the possibility that they may represent significant archeological sites.

Threatened and Endangered Species: Preliminary indications are that no known threatened and/or endangered species or their critical habitat will be affected by the proposed work.

Essential Fish Habitat: This notice initiates the Essential Fish Habitat consultation requirements of the Magnuson-Stevens Fishery Conservation and Management Act. Our initial determination is that the proposed action would not have a substantial adverse impact on Essential Fish Habitat or Federally managed fisheries in the Gulf of Mexico. Our final determination relative to project impacts and the need for mitigation measures is subject to review by and coordination with the National Marine Fisheries Service.

Public Interest Review Factors: This application will be reviewed in accordance with 33 CFR 320-330, the Regulatory Programs of the Corps of Engineers, and other pertinent laws, regulations and executive orders. The decision whether to issue a permit will be based on an evaluation of the probable impacts, including cumulative impacts, of the proposed activity on the public interest. That decision will reflect the national concern for both protection and utilization of important resources. The benefits, which reasonably may be expected to accrue from the proposal, must be balanced against its reasonably foreseeable detriments. All factors, which may be relevant to the proposal, will be considered: among those are conservation, economics, aesthetics, general environmental concerns, wetlands, historic properties, fish and wildlife values, flood hazards, floodplain values, land use, navigation, shore erosion and accretion, recreation, water supply and conservation, air and water quality, energy needs, safety, food and fiber production, mineral needs and, in general, the needs and welfare of the people.

Solicitation of Comments: The Corps of Engineers is soliciting comments from the public, Federal, State, and local agencies and officials, Indian tribes, and other interested parties in order to consider and evaluate the impacts of this proposed activity. Any comments received will be considered by the Corps of Engineers to determine whether to issue, modify, condition or deny a permit for this proposal. To make this decision, comments are used to assess impacts on endangered species, historic properties, water quality, general environmental effects, and the other public interest factors listed above. Comments will be used in the preparation of the Final Environmental Impact Statement pursuant to the National Environmental Policy Act. Comments are used to determine the overall public interest of the proposed activity.

This public notice is being distributed to all known interested persons in order to assist in developing facts upon which a decision by the Corps of Engineers may be based. For accuracy and completeness of the record, all data in support of or in opposition to the proposed work should be submitted in writing setting forth sufficient detail to furnish a clear understanding of the reasons for support or opposition.

Close of Comment Period: All comments pertaining to this Public Notice must be postmarked by February 18, 2002. Extensions of the comment period may be granted for valid reasons provided a written request is received by the limiting date. If no comments are received by that date, it will be considered that there are no objections. Comments and requests for additional information should be submitted to:

Sharon Manzella Tirpak
Regulatory Branch, CESWG-PE-RE
U.S. Army Corps of Engineers
P.O. Box 1229
Galveston, Texas 77553-1229
409-766-3136 Phone
409-766-3931 Fax

DISTRICT ENGINEER
GALVESTON DISTRICT
CORPS OF ENGINEERS

Public Hearing Date and Location:

Date: Tuesday, January 29, 2002

Time: Workshop: 5:00 - 6:30 PM / Hearing 7:00 PM

Place: Charles Doyle Convention Center

2010 5th Avenue North (21st and Phoenix Lane)

Texas City, Texas

Conduct of the Public Hearing: The District Engineer, Galveston District, Corps of Engineers, will serve as the presiding officer at the public hearing. The District Engineer will take all actions necessary to conduct a fair, impartial, and orderly hearing. To this end, the powers of the District Engineer include, but are not limited to the following:

- (a) To regulate the course of the hearing and conduct of the parties, their counsel, and the public in attendance.
- (b) To establish reasonable time limits for oral statements of parties, their counsel, or representatives.
 - (c) To receive into evidence all written statements, charts, tabulations, and similar data.
 - (d) To ask questions of speakers for purposes of clarification.

All persons will be given an opportunity to present oral and written statements, including documentary materials, at the public meeting. Prior to the opening of the meeting, each person will be requested to complete an attendance card. The attendance card will contain information blocks on which persons attending the public meeting can give their name, address, and whether they wish to present an oral statement during the public hearing.

Statements and information may be provided without restriction by formal procedures and rules of evidence; however, all statements and information provided must concern the subject matter of the hearing.

All statements shall be addressed to the District Engineer. Cross-examination of any person addressing the public meeting by any person in attendance will not be allowed.

The District Engineer or representative will be given the first opportunity to speak, followed by the applicant, the City of Texas City. A short presentation will then be made by PBS&J, the contractor that prepared the DEIS. Public comments will commence with Federal, State and local elected officials. All persons intending to speak at the public hearing will be called upon and should come prepared to complete their oral statement in not more than three minutes. Statements by any person that cannot be completed within the time allotment should be summarized orally, and the full text submitted in writing.

Written statements or information materials for inclusion in the record, including documentary materials, may be presented during the public meeting or may be mailed to the District Engineer, Galveston District, Corps of Engineers, at the address stated above. All statements, both oral and written, will become part of the official record of the public hearing and will be made

available for public examination. Mailed statements to be included in the record must be postmarked by February 18, 2002.

Directions:

From League City or other points north take I-45 South to the 1764/Palmer Highway exit. Follow this into Texas City and to 21st Street. Take a right turn onto 21st Street. The Convention Center will be on your left.

From Galveston or other points south take I-45 North to SH 146. Stay on SH 146 until the 1764/Palmer Highway exit. After exiting the highway you will turn right onto Palmer Highway. Follow until 21st Street. Turn right onto 21st Street and the Convention Center will be on your left.



APPLICATION FOR DEPARTMENT OF THE ARMY PERMIT (33 CFR 325)

OMB APPROVAL NO. 07 10-0003 Expires June 30, 2000

Public reporting burden for this collection of information is expected to average 10 hours per response, although the majority of applications should require 5 hours or less. This includes the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Department of Defense, Washington Headquarters Service Directorate of Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302; and to the office of Management and Budget, Paperwork Reduction Project (0710-0003), Washington DC 20503. Please DO NOT RETURN your form to either of those addresses. Completed applications must be submitted to the District Engineer having jurisdiction over the location of the proposed activity.

PRIVACY STATEMENT

Authority: 33 USC 401, Section 10; 1413, Section 404. Principal Purpose: These laws require permits authorizing activities in, or affecting, navigable waters of the United States, the discharge of dredged or fill material into waters of the United States, and the transportation of dredged material for the purpose of dumping it into ocean waters. Routine Uses: Information provided on this form will be used in evaluating the application for a permit. Disclosure: Disclosure of requested information is voluntary. If information is not provided, however, the permit application cannot be processed nor can a permit be issued.

One set of original drawings or good reproducible copies which show the location and character of the proposed activity must be attached to this application (see sample drawings and instructions) and be submitted to the District Engineer having jurisdiction over the location of the proposed activity. An application that is not completed in full will be returned.

	(ITEMS 1 THRU 4 1	O BE FILLED BY THE CORPS)			
1. APPLICATION NO. 21979	2. FIELD OFFICE CODE	3. DATE RECEIVED	4. DATE APPLICATION COMPLETED		
	(ITEMS TO BE	FILLED BY APPLICANT)			
5. APPLICANT'S NAME City of Texas City – Doug Hoover		8. AUTHORIZED AGENT'S NAME AND TITLE (an agent is not required) Joe C. Moseley, Ph.D., P.E., Principal			
6. APPLICANT'S ADDRESS P.O. Box 2608 Texas City, Texas 77592		9. AGENT'S ADDRESS Shiner Moseley and Associates, Inc. 555 N. Carancahua, Suite 1650 Corpus Christi, Texas 78478			
7. APPLICANT'S PHONE NOS.	W/AREA CODE	10. AGENT'S PHONE NOS. W/AREA CODE			
a. Residence		a. Residence			
b. Business 409-643-59	27	b. Business 361-857-221	b. Business 361-857-2211		
11.	STATEMENT O	F AUTHORIZATION			
I hereby authorize Shiner M furnish, upon request, supplement	Moseley and Associates, Inc. tal information in support of this pe Boug Hoover, Director of M	rmit application.	he processing of this application and to 8/21/01 DATE		
	NAME, LOCATION AND DE	SCRIPTION OF PROJECT OR ACTIV	ITY		
12. PROJECT NAME OR TITLE Shoal Point Container Ter	•				
13. NAME OF WATERBODY, IF KNOWN (if applicable)		14. PROJECT STREET ADDRESS (if applicable)			
Galveston Bay		N/A			
15. LOCATION OF PROJECT					
Galveston COUNTY	Texas STATE				
16. OTHER LOCATION DESCRI	PTIONS, IF KNOWN (see instructions)				
Immediately east of Texas	: City Harbor and south of Tex	as City Ship Channel.			

17. DIRECTIONS TO THE SITE

Proceed along Loop 197 east for approximately 2 miles. Turn right at Gulf Coast Waste Disposal Authority and proceed along unimproved road for approximately 3 miles.

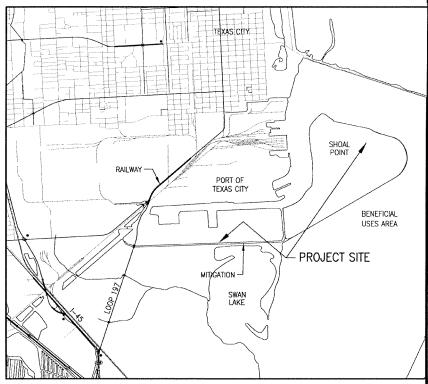
18. Nature of Activity (Description of project, include all features)						
	Construct a containership terminal including container yard, access roadway, wharves, berthing area, turning basin, chann-deepening, associated infrastructure, disposal areas, and habitat using dredged material.					
19	9. Project Purpose (Describe the reason or purpose of the project, see instructions)					
	Provide a modern container terminal.					
	USE BLOCKS 20-22 IF DREDGED AND/OR FILL MATERIAL IS TO BE DISCHARGED					
20). Reason(s) for Discharge					
	Removal of material from berthing areas, turning basin, and channel deepening. Material to be placed for the following purposes: site preparation, construction of containment levees, and creation of additional habitat.					
21	. Type(s) of Material Being Discharged and the Amount of Each Type in Cubic Yards					
	Total of 11 million cubic yards: mix of stiff clay - 70%, sand - 20%, and silt - 10%					
22	Surface Area in Acres of Wetlands or Other Waters Filled (see instructions) A total of 13.34 acres of shallow water, vegetated habitat will be filled during project construction. A total of 650.9 acres of oper water will be dredged and a total of 366.7 acres of open water habitat will be used for construction of beneficial use sites.					
23.	. Is Any Portion of the Work Already Complete? Yes 🔲 No 🔯 IF YES, DESCRIBE THE COMPLETED WORK					
24. Addresses of Adjoining Property Owners, Lessees, Etc., Whose Property Adjoins the Waterbody (If more than can be entered please attach a supplemental list)						
	Port of Texas City P.O. Box 591 P.O. Box 471 Disposal Authority P.O. Box 12873 Texas City, TX 77592-0591 Texas City, TX 77592 P.O. Box 471 P.O. Box 12873 Austin, TX 78711-2873 Houston, TX 77058					
25.	List of Other Certifications or Approvals/Denials Received from other Federal, State or Local Agencies for Work Described in This Application.					
	AGENCY TYPE APPROVAL* IDENTIFICATION NUMBER DATE APPLIED DATE APPROVED DATE DENIED					
	None					
* W	ould include but is not restricted to zoning, building and flood plain permits					
	Application is hereby made for a permit or permits to authorize the work described in this application. I certify that the information in this application is complete and accurate. I further certify that I possess the authority to undertake the work described herein or am acting as the duly authorized agent of the applicant.					
	Joe C Moceley I 11/05/01					
•	SIGNATURE OF APPLICANT DATE SIGNATURE OF AGENT DATE					
	The application must be signed by the person who desires to undertake the proposed activity (applicant) or it may be signed by a duly authorized agent if the statement in Block 11 has been filled out and signed.					
	40.14.0.0. Quality 40.04 appriliant that, Whenever in any manage within the jurisdiction of any department or against of the United States					

18 U.S.C. Section 1001 provides that: Whoever, in any manner within the jurisdiction of any department or agency of the United States knowingly and willfully falsifies, conceals, or covers up any trick, scheme, or disguises a materiel fact or makes any false, fictitious or fraudulent statements or representations or makes or uses any false writing or document knowing same to contain any false, fictitious or fraudulent statements or entry, shall be fined not more than \$10,000 or imprisoned not more than five years or both.

4

<u>VICINITY MAP</u>

PROJECT LOCATION



LOCATION MAP

NOTES:

- 1. THE PROJECT PURPOSE IS TO BUILD A MODERN CONTAINER TERMINAL THAT INCLUDES CHANNEL DEEPENING, BERTHS, WHARFS, CONTAINER YARD, ACCESS CORRIDOR, MITIGATION, AND BENEFICIAL USE SITES.
- 2. MAJOR ASSETS OF SHOAL POINT ARE: LANDSIDE ACCESS, WATER ACCESS TO GULF, COMPATIBLE LAND USE, MINIMAL ENVIRONMENTAL IMPACTS AND ABILITY TO EXPAND. CONSTRUCT PROJECTS IN PHASES.
- 3. THE ENTIRE PROJECT WILL BE PERMITTED, HOWEVER IT WILL BE BUILT IN THREE PHASES BEGINNING WITH A 125 ACRE TERMINAL AND TWO BERTHS WITH AN ULTIMATE SIZE OF 400 ACRES AND SIX BERTHS.
- 4. DREDGE MATERIAL FROM THIS PROJECT AND THE EXISTING MAINTENANCE OF THE TEXAS CITY CHANNEL PROJECT WILL BE USED TO CONSTRUCT MULTIPLE BENEFICIAL USE SITES (SHALLOW WATER) NEAR SHOAL POINT.
- 5. MITIGATION FOR WETLAND IMPACTS WILL BE PROVIDED AT THE NORTH END OF SWAN LAKE DURING THE CONSTRUCTION OF PHASE I.

APPLICANT: CITY OF TEXAS CITY

PURPOSE/ACTIVITIES: CONSTRUCT TERMINAL WITH WHARVES AND ACCESS CORRIDOR, DREDGE BERTHS AND TURNING BASIN, DEEPEN EXISTING CHANNEL.

DATUM: USACE MLT (MEAN LOW TIDE)

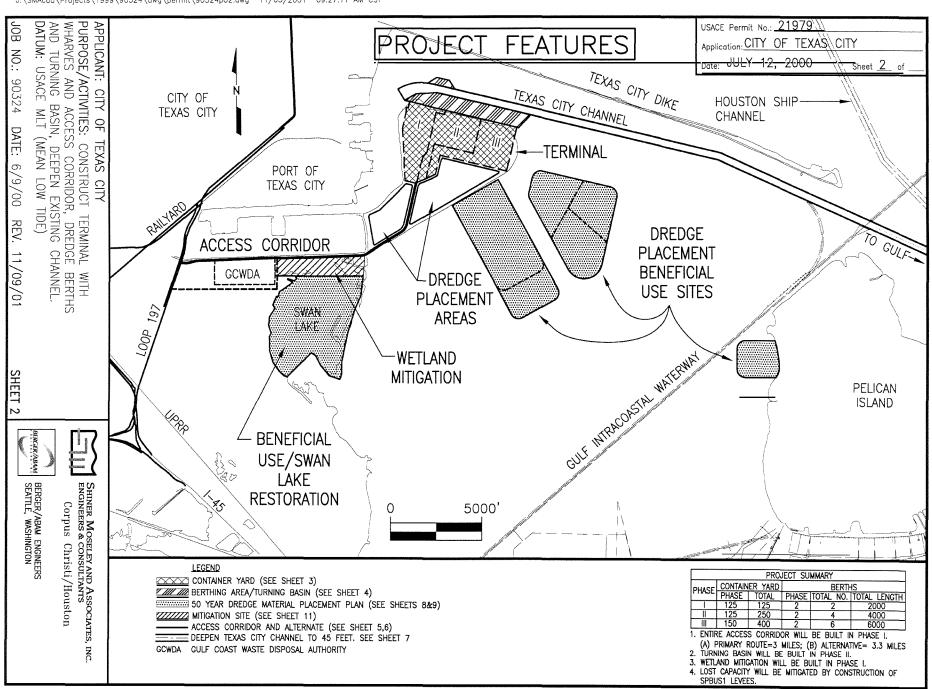
JOB NO.: 90324 DATE: 6/9/00 REV. 11/09/01

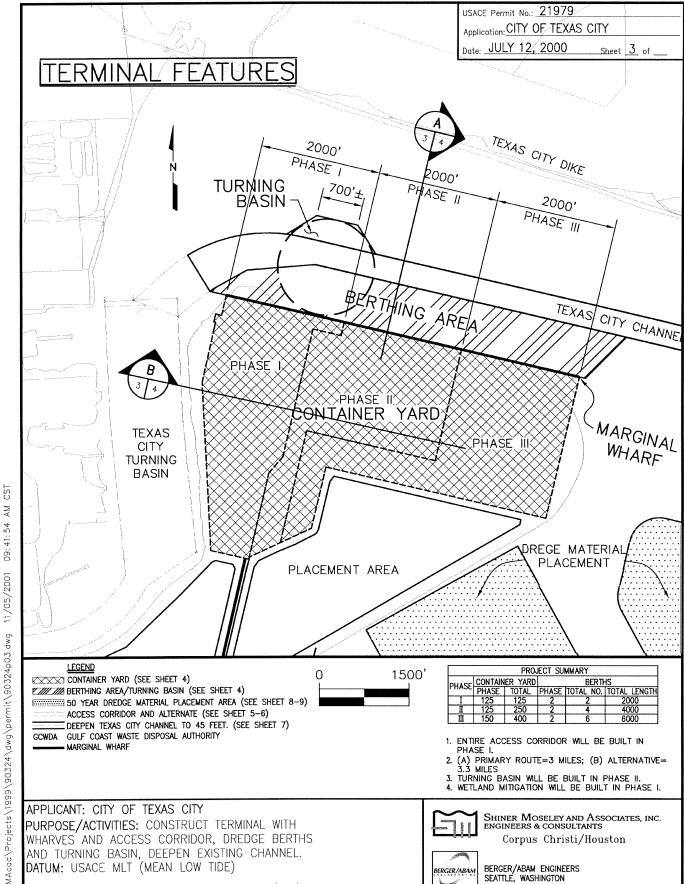
Shiner Moseley and Associates, inc. engineers & consultants Corpus Christi/Houston



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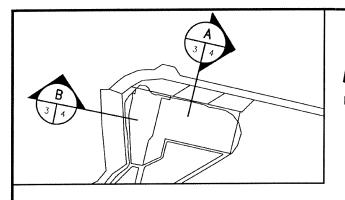




SHEET 3

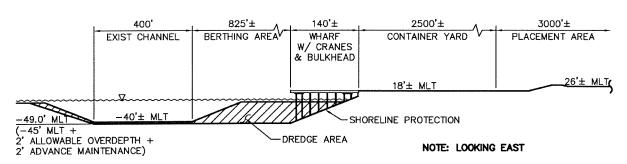
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JOB NO.: 90324 DATE: 6/9/00 REV. 11/09/01

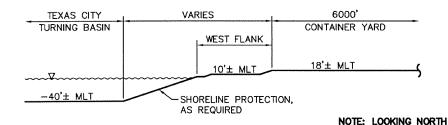


USACE Permit No.: 21979 Application: CITY OF TEXAS CITY Date: JULY 12, 2000 Sheet 4 of

TERMINAL, BERTH & WHARF TYPICAL SECTIONS



SECTION THROUGH BERTHING BASIN, WHARF TERMINAL SCALE: N.T.S.



SECTION THROUGH TERMINAL SCALE: N.T.S.

NOTES:

- SHORELINE STABILIZATION REQUIRED UNDER WHARF. STABILIZATION MAY BE BULKHEAD, REVETMENT, OR OTHER STRUCTURAL METHOD.
- SUBMERGED AREA UNDER WHARF:

PHASE II - 275,000 SF PHASE II - 550,000 SF PHASE III - 825,000 SF

APPLICANT: CITY OF TEXAS CITY

PURPOSE/ACTIVITIES: CONSTRUCT TERMINAL WITH WHARVES AND ACCESS CORRIDOR, DREDGE BERTHS AND TURNING BASIN, DEEPEN EXISTING CHANNEL.

DATUM: USACE MLT (MEAN LOW TIDE)

JOB NO.: 90324 DATE: 6/9/00 REV. 11/09/01



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SHEET 4

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SHEET 5

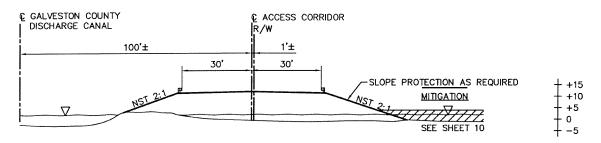
JOB NO.: 90324 DATE: 6/9/00 REV. 11/09/01

ACCESS CORRIDOR TYPICAL SECTIONS CONT.

USACE Permit No.: <u>21979</u>

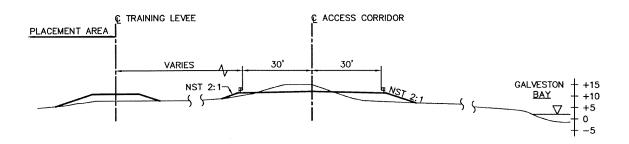
Application: CITY OF TEXAS CITY

Date: <u>JULY 12, 2000</u> Sheet 6 of ____

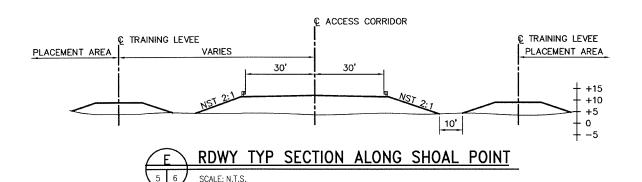


C RDWY TYP SECTION ADJACENT TO MITIGATION SITE & SWAN LAKE

5 6 SCALE: N.T.S.



D RDWY TYP SECTION ALONG SHOAL POINT SOUTHERN LEVEE SCALE: N.T.S.



N.S.T. = NOT STEEPER THAN

APPLICANT: CITY OF TEXAS CITY

PURPOSE/ACTIVITIES: CONSTRUCT TERMINAL WITH WHARVES AND ACCESS CORRIDOR, DREDGE BERTHS AND TURNING BASIN, DEEPEN EXISTING CHANNEL.

DATUM: USACE MLT (MEAN LOW TIDE)

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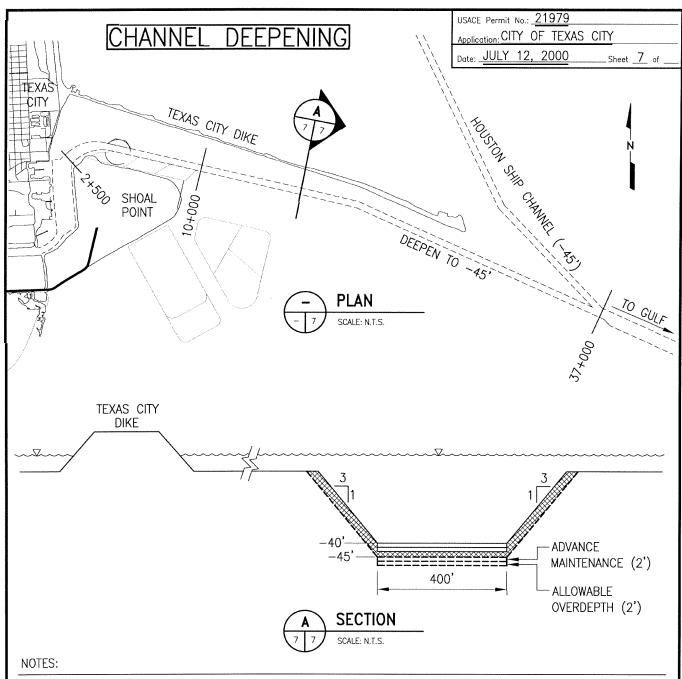
SHEET 6

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- 1. THE EXISTING TEXAS CITY CHANNEL WILL BE DEEPENED FROM 40 FT. TO 45 FT. FROM THE SHOAL POINT TERMINAL SITE TO THE HOUSTON SHIP CHANNEL, (STA 2+625 TO 37+428).
- 2. TO BE CONSISTENT WITH DREDGING PROCEDURES IN FEDERAL CHANNELS THE DEEPENING WILL INCLUDE 2 FT OF ADVANCE MAINTENANCE DREDGING AND 2 FT OF ALLOWABLE OVERDEPTH.
- 3. THE HOUSTON SHIP CHANNEL IS CURRENTLY BEING DEEPENED TO A DEPTH OF 45 FT.
- 4. THE CURRENT BOTTOM WIDTH OF 400 FT. WILL BE MAINTAINED.

APPLICANT: CITY OF TEXAS CITY

PURPOSE/ACTIVITIES: CONSTRUCT TERMINAL WITH WHARVES AND ACCESS CORRIDOR, DREDGE BERTHS AND TURNING BASIN, DEEPEN EXISTING CHANNEL.

DATUM: USACE MLT (MEAN LOW TIDE)

JOB NO.: 90324 DATE: 6/9/00 REV. 11/09/01



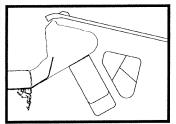
SHINER MOSELEY AND ASSOCIATES, INC. ENGINEERS & CONSULTANTS

Corpus Christi/Houston



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SHEET 7



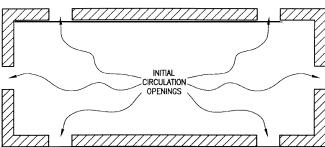
USACE Permit No.: <u>21979</u>

Application: CITY OF TEXAS CITY

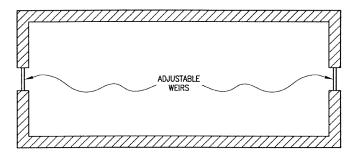
Date: <u>JULY 12, 2000</u> Sheet <u>8</u> of ____

50 YEAR DREDGE PLACEMENT AREAS/BENEFICIAL USES SITES ILLUSTRATIVE CONCEPT

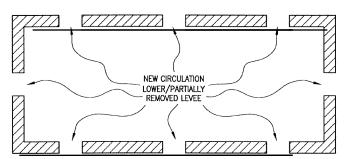
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STAGE 1: BUILD CONTAINMENT LEVEES WITH NEW CONSTRUCTION; DREDGE MATERIAL, SHORELINE PROTECTION PROVIDED AS NEEDED; OPENINGS IN LEVEES WILL ALLOW CIRCULATION & WATER EXCHANGE INSIDE CELL.



STAGE 2: FILL WITH DREDGE MATERIAL AND ALLOW TO CONSOLIDATE.
STAGE 3: AFTER CONSOLIDATION, SHAPE FILL MATERIAL TO ELEVATIONS APPROPRIATE TO CONSTRUCT SHALLOW WATER HABITAT CONSISTING OF UPLANDS, HIGH MARSH, LOW MARSH, SUBMERGED GRASS AND OPEN WATER.



STAGE 4: PLANT VARIOUS TYPES OF DIVERSE HABITATS (BY OTHERS). PARTIALLY REMOVE LEVEES TO PROVIDE WATER CIRCULATION/EXCHANGE; LEAVE SIGNIFICANT PORTIONS OF LEVEES IN PLACE, EITHER EMERGENT OR SUBMERGED TO PROVIDE STABILIZATION/ PROTECTION OF SHALLOW WATER HABITAT.

NOTE: THIS SECTION IS REPRESENTATIVE ONLY; DETAILS WILL VARY DEPENDING ON SPECIFIC LOCATION

APPLICANT: CITY OF TEXAS CITY

PURPOSE/ACTIVITIES: CONSTRUCT TERMINAL WITH WHARVES AND ACCESS CORRIDOR, DREDGE BERTHS AND TURNING BASIN, DEEPEN EXISTING CHANNEL.

DATUM: USACE MLT (MEAN LOW TIDE)

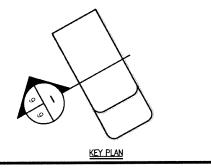
JOB NO.: 90324 DATE: 6/9/00 REV. 11/09/01



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LEGEND

SHORELINE PROTECTION NEW CONSTRUCTION MATERIAL MAINTENANCE MATERIAL REMOVE PORTIONS OF LEVEE

USACE Permit No.: 21979

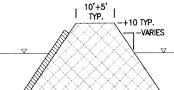
Application: CITY OF TEXAS CITY

Date: JULY 12, 2000

Sheet <u>9</u> of

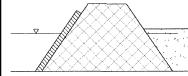
50 YEAR DREDGE PLACEMENT AREAS/BENEFICIAL USES SITES ILLUSTRATIVE CONCEPT (CONT.)

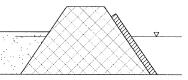
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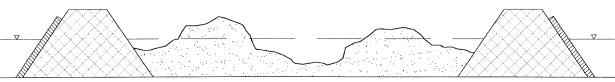
STAGE 1: BUILD CONTAINMENT LEVEES WITH NEW CONSTRUCTION; DREDGE MATERIAL, SHORELINE PROTECTION PROVIDED AS NEEDED; OPENINGS IN LEVEES WILL ALLOW CIRCULATION & WATER EXCHANGE INSIDE CELL WHERE APPLICABLE.



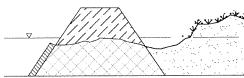


STAGE 2: FILL WITH DREDGE MATERIAL AND ALLOW TO CONSOLIDATE. CONSTRUCT ADJUSTABLE WEIRS TO HANDLE EFF.





STAGE 3: AFTER CONSOLIDATION, SHAPE FILL MATERIAL TO ELEVATIONS APPROPRIATE TO CONSTRUCT SHALLOW WATER HABITAT CONSISTING OF UPLANDS, HIGH MARSH, LOW MARSH, SUBMERGED GRASS AND OPEN WATER.





STAGE 4: PLANT VARIOUS TYPES OF DIVERSE HABITATS. PARTIALLY REMOVE LEVEES TO PROVIDE WATER CIRCULATION/EXCHANGE; LEAVE SIGNIFICANT PORTIONS OF LEVEES IN PLACE, EITHER EMERGENT OR SUBMERGED TO PROVIDE STABILIZATION/ PROTECTION OF SHALLOW WATER HABITAT.

APPLICANT: CITY OF TEXAS CITY

PURPOSE/ACTIVITIES: CONSTRUCT TERMINAL WITH WHARVES AND ACCESS CORRIDOR, DREDGE BERTHS AND TURNING BASIN, DEEPEN EXISTING CHANNEL.

DATUM: USACE MLT (MEAN LOW TIDE)

JOB NO.: 90324 DATE: 6/9/00 REV. 11/09/01



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BERGER/ABAM ENGINEERS SEATTLE, WASHINGTON

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APPLICANT: CITY OF TEXAS CITY

PURPOSE/ACTIVITIES: CONSTRUCT TERMINAL WITH WHARVES AND ACCESS CORRIDOR, DREDGE BERTHS AND TURNING BASIN, DEEPEN EXISTING CHANNEL.

DATUM: USACE MLT (MEAN LOW TIDE)

JOB NO.: 90324 DATE: 6/9/00 REV. 11/09/01

Shiner Moseley and Associates, inc. engineers & consultants Corpus Christi/Houston





SHEET 10

BERGER/ABAM ENGINEERS SEATTLE, WASHINGTON

CST

USACE Permit No.: <u>21979</u>

Application: CITY OF TEXAS CITY

Date: JULY 12, 2000

Sheet 11 of

MITIGATION MONITORING PARAMETERS

- 1. A transplant survival survey of the planted mitigation area must be performed within 60 calendar days following the initial planting effort. If at least 50% survival of transplants is not achieved within 60 calendar days of planting, a second planting effort will be completed within 60 calendar days of completing the initial survival survey. If optimal season requirements for replanting targeted species is not suitable when replanting would be required, the Corps Galveston District (Corps) must approve a replanting schedule.
- 2. Written reports detailing plant survival must be submitted to the Corps within 30 calendar days of completing the initial survival survey and any subsequent replanting effort.
- 3. If after one year from the initial planting effort (or subsequent planting efforts) the site does not have at least 35% aerial coverage of targeted vegetation, those areas that are not vegetated will be replanted using the original planting specifications.
- 4. If after three years from the initial planting effort (or subsequent planting efforts) the site does not have at least 70% aerial coverage of targeted vegetation, those areas that are not vegetated will be replanted using the original planting specifications.
- 5. In addition to the initial survey report, progress reports will be submitted to the Corps Galveston District at 6 months, 1 year, 2 year, and 3 year intervals following the initial transplanting effort or subsequent replanting efforts. Photos of the mitigation site should be included.

APPLICANT: CITY OF TEXAS CITY
PURPOSE/ACTIVITIES: CONSTRUCT TERMINAL WITH
WHARVES AND ACCESS CORRIDOR, DREDGE BERTHS
AND TURNING BASIN, DEEPEN EXISTING CHANNEL.

DATUM: USACE MLT (MEAN LOW TIDE)

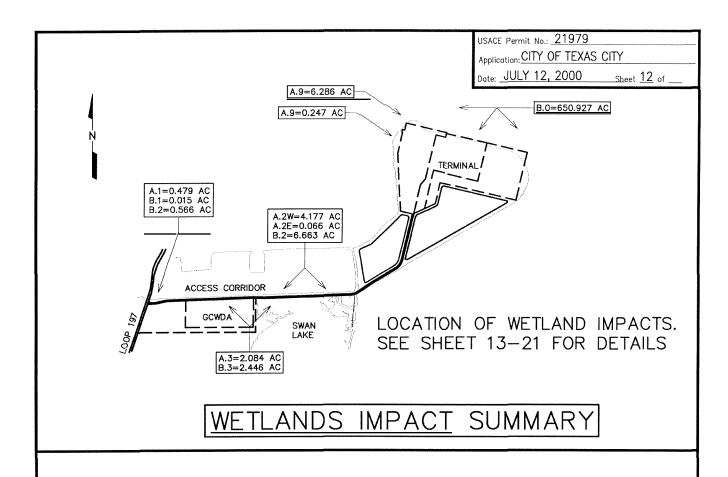
JOB NO.: 90324 DATE: 6/9/00 REV. 11/09/01



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Summary of Jurisdictional Wetlands

A. Section 404 Wetlands							
Location ID	Area (Acres)	Description					
A.1	0.479	Adjacent to Loop 197					
A.2	0.066	Swan Lake – East of Upland Ridge					
A.2	4.177	Swan Lake - West of Upland Ridge					
A.3	2.084	South Shore of Hurricane Channel					
A.5	6.286	North Shoreline of Shoal Point					
A.9	0.247	Drainage Ditch from Shoal Point Cell C					
Subtotal	13.339						
B. Open Water – Section 10							
Location ID	Area (Acres)	Description					
B.1	0.015	Adjacent to Loop 197					
B.1	0.566	Adjacent to Loop 197					
B.2	6.663	Swan Lake					
B.3	2.446	Hurricane Channel					
B.0	650.927	Areas of Other Dredging - berthing area,					
		turning basin, ship channel					
Subtotal	660.617	1707/101					
TOTAL	673.956						

APPLICANT: CITY OF TEXAS CITY

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DATUM: USACE MLT (MEAN LOW TIDE)

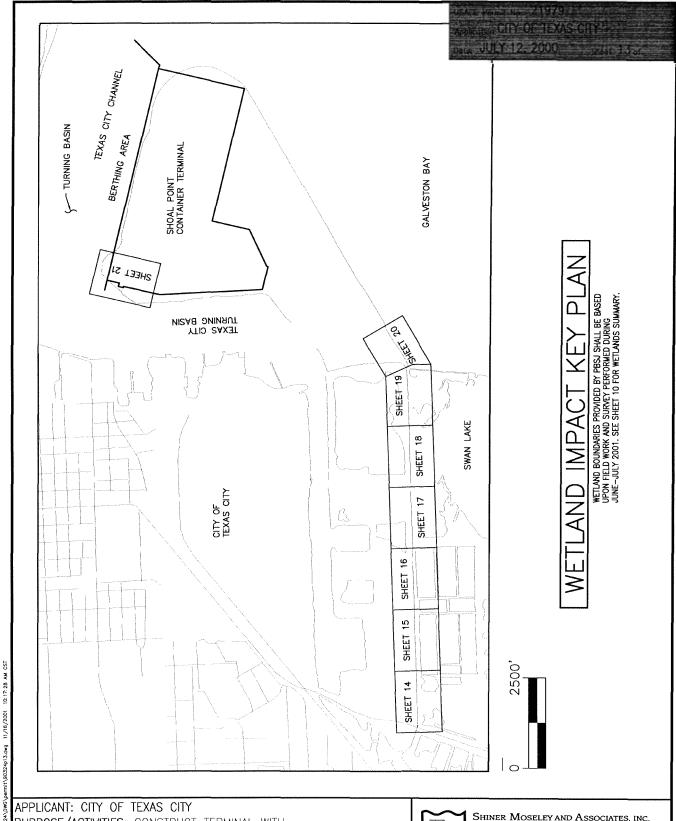
JOB NO.: 90324 DATE: 6/9/00 REV. 11/09/01

SHINER MOSELEY AND ASSOCIATES, INC. ENGINEERS & CONSULTANTS

Corpus Christi/Houston



BERGER/ABAM ENGINEERS SEATTLE, WASHINGTON



PURPOSE/ACTIVITIES: CONSTRUCT TERMINAL WITH WHARFS AND ACCESS CORRIDOR, DREDGE BERTHS AND TURNING BASIN, DEEPEN EXISTING CHANNEL. DATUM: USACE MLT (MEAN LOW TIDE)

JOB NO.: 90324 **DATE:** 6/9/00 REV. 11/09/01



SHINER MOSELEY AND ASSOCIATES, INC. ENGINEERS & CONSULTANTS Corpus Christi/Houston



BERGER/ABAM ENGINEERS SEATTLE, WASHINGTON

SHEET 13

APPENDIX H-15

CORRESPONDENCE AND MEETING MINUTES REGARDING ALTERNATIVE TRUCK ROUTE

Apr-05-02 12:11P SHUAL POINT ACCESS ROUTE Minutes February 13, 2002

A public workshop with TxDOT officials, Galveston county officials, and Texas City officials was held on February 13, 2002 at 9:30 A.M. at the American National Bank Building, Galveston, Texas. Attendees were:

Galveston County

TxDOT

Gary Trictsch

Gabe Johnson

City of Texas City Mayor Carlos Garza

James McWhorter

TCIT
Alex Parkman

Judge Yarbrough
Commissioner Eddie Barr

Commissioner Eddie Barr Commissioner Eddie Janek

Commissioner Stephen Holmes

Commissioner Ken Clark

Mike Fitzgerald Paul Selman

The purpose of the workshop was to conduct an annual review and status report of various TxDOT projects within Galveston County.

The specific purpose of these minutes is to recap the discussion held at the workshop concerning an alternate access route to the Shoal Point Mega Port. Aerial photos of the area around the Texas City Wye from I-45/FM 519 to Loop 197 were displayed. Mayor Carlos Garza explained reasons for a needed truck route for the Mega Port to bypass the anticipated congested frontage road on the T. C. Wye adjacent to Omega Bay and Bayou Vista. He explained that the new port should open about 2005. Truck traffic would ultimately (about year 2025) hit 10,000 trips per day, 5000 trips into the port and 5000 out of the port and a large percentage of these trucks are expected to traverse the T. C. Wye frontage roads. Mayor Garza expressed a desire to have an alternate route completed in the next few years. The previously discussed "Exit 9" routing was highlighted by Mike Fitzgerald on the maps and other general route possibilities were shown. Mr. Gabe Johnson stated schematic designs of the new T.C. Wye have been initiated.

Mr. Trietsch and Mr. Johnson of Tx DOT explained that the project (a port connector road) may be feasible. But they suggested the first step be a feasibility route study. Then submit to HGAC for inclusion in the regional plan. Mr. Trietsch stated that no engineering money was available in this year's TxDOT budget for a feasibility study. Mr. Trietsch thought the difficult portion of the project would be funding. Normally if ROW, environmental, and design are completed, the construction funding will somehow follow.

Mr. Trietsch suggested one approach would be a locally funded project on the road itself with TxDOT providing the required interchanges and/or connections to the TxDOT highways. This scenario would still require all federal funding and approvals. Funding could come from HGAC selection, Texas Highway Commission selection, or Federal Demonstration allocations, which is a several year process.

Mayor Garza asked how this new connector would affect the HWY 146 M.I.S. conclusions. Mr. Trietsch stated now would be a good time to incorporate this potential project into the HWY 146 M.I.S. Both Bayport and Shoal Point truck traffic impacts were already included in the M.I.S.

Mr. Fitzgerald pointed out the proposed HWY 146 bridge at TexTin could also be impacted by the potential connector highway depending on its final routing alignment. Mr. Trietsch stated he would not slow down the TxTin bridge project design, which is currently at about 75% completion, but at some point, the two projects may be merged if alignment coincides.

Judge Yarborough suggested Mike Fitzgerald, James McWhorter, and Gabe Johnson develop a flow chart on how the project should progress along with decision points and a reasonable time line schedule. Judge Yarborough cautioned on presenting an overly optimistic schedule to the public. Judge Yarborough also suggested a fact sheet be prepared on the I-45 M.I.S. and on the HWY 146 M.I.S.

DRAFT

On February 26th 2002, Mike Fitzgerald, James McWhorter, Carol McLemore, and Jim Darden of URS Corp met to discuss the concerns of the City of LaMarque and Bayou Vista regarding the truck traffic to the new Texas City International Terminal (TCIT).

One of the main points which was discussed was that the trucks going to and from the new port will be carrying containers and are not classified as hazardous cargo. Therefore these trucks cannot be forced to use a new route or any specific route.

It was the consensus of the group that a new route would be difficult to fund and may not be used by the truckers. In order to make an informed decision on how to proceed the group felt it would be desirable that an abbreviated study be done to look at all the alternatives including existing and new routes, interim improvements and the addition of message boards and sound walls.

The study should examine each alternative in detail in light of the projected additional truck traffic which the port will be generate on 1-45 and the other routes in the years 2005, 2015, and 2025.

The pros and cons of each alternative should be listed and examined in detail. The pros and cons should include all factors including but not limited to

- 1. Current long range plans for I-45, SH146, SH3 identified by an MIS
- 2. Costs
- 3. Timeline to implement and how that fits with the projected truck traffic in 2005, 2015, and 2025
- 4. Chances of obtaining federal or state funding
- 5. New impacts to neighborhoods or communities adjacent to each alternative
- 6. Air quality conformity with the regional plan

The study should take no longer than 60 days and have a budget of approximately \$30,000.

City of

MAYOR - Dennis Rygaard
MAYOR PRO-TEM - Danny Ray Phillips
COUNCIL MEMBERS - Larry Crow, Sr., James Osteen, Richard Torres
CITY MANAGER - Carol L. McLemore

Set your <u>sites</u> on La Marque.

May 3, 2002

Col. Leonard D. Waterworth
Commander, U.S. Army Corps of Engineers
2000 Point Road
P. O. Box 1229
Galveston, Texas 77553

Re: Application by City of Texas City for USACE Permit for Shoal Point Container Terminal

Dear Colonel Wentworth:

The City of La Marque, Galveston County and the City of Texas City have agreed to retain a consultant to address the traffic concerns the residents of Omega Bay and Bayou Vista have expressed concerning the traffic that the port will generate. We feel that this is a positive step in the right direction to ensure that those concerns will be addressed.

The City Council and citizens of La Marque support the Shoal Point project and the tremendous economic benefits it will have in the area. Since we have worked together and taken steps to solve the concerns of our citizens, the City Council would support the permit being issued for the port.

We are pleased with the response of the City of Texas City and Galveston County for their response to the concerns of our citizens and appreciate their help in assisting us. This is just one more example of how we can work together to accomplish a goal that will benefit everyone.

Thank you for your attention to this matter.

Sincerely,

Dennis B. Rygaard

Mayor

TEXAS CITY



MAY 16 2002

CARLOS GARZA Mayor

OFFICE OF THE MAYOR

May 13, 2002

Commander Leonard Waterworth
United States Army Corps of Engineers – Galveston District
P. O. Box 129
Galveston, Texas 77553-1229

Re: USACE Permit for Shoal Point Container Terminal

Dear Col. Waterworth:

The City of Texas City continues to work with its neighboring city of La Marque to address the traffic concerns raised by the citizens of Omega Bay (La Marque) and the Village of Bayou Vista.

Recently, the City of La Marque, Galveston County and the City of Texas City agreed to retain a consultant to study the feasibility of, and identify, an alternate route. Furthermore, La Marque and Galveston County re-affirmed their support for the Shoal Point project and the issuance of the permit thereto.

Enclosed is a letter from County Judge James D. Yarbrough supporting our project and the issuance of the permit. La Marque Mayor Dennis Rygaard has favored me with a copy of his letter of support previously mailed to you.

Sincerely,

CG:sdc

MAY 1 6 2002



(409) 766-2244 (281) 316-8300 Ext. 2244 Fax (409) 765-2653

JAMES D. YARBROUGH

COUNTY COURTHOUSE 722 MOODY GALVESTON, TEXAS 77550

COUNTY JUDGE
COUNTY OF GALVESTON

April 29, 2002

Col. Leonard D. Waterworth Commander, U. S. Army Corps of Engineers 2000 Ft. Point Road P. O. Box 1299 Galveston, TX 77553

Re: Application by City of Texas City for

USACE Permit for Shoal Point Container Terminal

Dear Colonel Waterworth:

The purpose of this letter is to express our support for the Shoal Point project and the tremendous economic benefits it will produce for our community.

Galveston County, along with the cities of La Marque and Texas City have agreed to retain a consultant to address the traffic concerns of the Omega Bay and Bayou Vista residents. The local communities joining together to provide an alternative traffic route for the Shoal Point project is another example of our unparalleled intergovernmental working relationships.

Thank you for your consideration of issuing the USACE Permit to the City of Texas.

Sincerely,

James D. Yarbrough

JDY:mab

APPENDIX I ENGLISH-METRIC CONVERSION TABLE

Appendix I English to Metric Conversion Table

ENGLISH-METRIC CONVERSIONS							
Symbol	From <i>English</i>	Multiply By	To Metric	Symbol			
LENGTH							
in	inches	2.5	centimeters	cm			
ft	feet	30	centimeters	cm			
ft	feet	0.3048	meters	m			
yd	yards	0.9	meters	m			
mi	miles	1.609	kilometers	km			
AREA							
in ²	square inches	6.5	square centimeters	cm ²			
ft²	square feet	0.0929	square meters	m ²			
yd²	square yards	0.8	square meters	m²			
mi²	square miles	2.59	square kilometers	km²			
ac	acres	4047	square meters	m ²			
ac	acres	0.4	hectares	ha			
VOLUME							
pt	pints	0.47	liters	1			
qt	quarts	0.95	liters	l			
gal	gallons	3.8	liters	1			
ft³	cubic feet	0.0283	cubic meters	m³			
yd³	cubic yards	0.76	cubic meters	m ³			
cfs or ft ³ /s	cubic feet per second	0.0283	cubic meters per second	m³/s			
cfs or ft ³ /s	cubic feet per second	0.646	million gallons per day	mgd			
mgd	million gallons per day	0.0438	cubic meters per second	m³/s			
mgd	million gallons per day	1.547	cubic feet per second	cfs or ft ³ /s			
TEMPERATURE							
°F	degrees Fahrenheit	5/9 (°F-32)	degrees Celcius	°C			

1-1

METRIC-ENGLISH CONVERSIONS						
Symbol	From <i>Metric</i>	Multiply By	To <i>English</i>	Symbol		
LENGTH						
cm	centimeters	0.4	inches	in		
m	meters	3.281	feet	ft		
m	meters	1.1	yards	yd		
km	kilometers	0.6214	miles	mi		
AREA						
cm ²	square centimeters	0.16	square inches	in ²		
m²	square meters	10.76	square feet	ft²		
m ²	square meters	1.2	square yards	yd²		
km²	square kilometers	0.3861	square miles	mi²		
m ²	square meters	0.0002471	acres	ac		
ha	hectares (10,000 m ²)	2.5	acres	ac		
VOLUME						
ml	milliliters	0.03	fluid ounces	fl oz		
1	liters	2.1	pints	pt		
1	liters	1.06	quarts	qt		
1	liters	0.26	gallons	gal		
m³	cubic meters	35.31	cubic feet	ft³		
m ³	cubic meters	1.3	cubic yards	yd³		
m ³ /s	cubic meters per second	35.31	cubic feet per second	cfs or ft ³ /s		
m³/s	cubic meters per second	22.821	million gallons per day	mgd		
TEMPERATURE						
°C	degrees Celcius	9/5 (°C+32)	degrees Fahrenheit	°F		

Source: TNRCC, 2002f.

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APPENDIX J

DRAFT ENVIRONMENTAL IMPACT STATEMENT COMMENTS AND RESPONSES

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Patty Peacock		
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Mr. and Mrs. John R. Pinkston		
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Larry and Pam Preuit		
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APPENDIX J-1 AGENCY COMMENTS AND RESPONSES



UNITED STATES DEPARTMENT OF COMMERCE National Oceanic and Atmospheric Administration

NATIONAL MARINE FISHERIES SERVICE

Southeast Regional Office 9721 Executive Center Drive N. St. Petersburg, Florida 33702

February 15, 2002

Colonel Leonard D. Waterworth District Engineer, Galveston District Department of the Army, Corps of Engineers P.O. Box 1229 Galveston, Texas 77553-1229

Dear Colonel Waterworth:

The National Marine Fisheries Service (NMFS) has reviewed the Draft Environmental Impact Statement (DEIS) for Texas City's Proposed Shoal Point Container Terminal dated January 2002. The proposed project is located in Galveston Bay adjacent to the Texas City Ship Channel. Our comments to the DEIS are as follows:

SECTION 3 - AFFECTED ENVIRONMENT

3.14.8 Essential Fish Habitat (EFH)

The Gulf of Mexico Fishery Management Council has identified the proposed project area as EFH for postlarval, juvenile, subadult and adult red drum (Sciaenops ocellatus), white shrimp (Litopenaeus setiferus) and brown shrimp (Farfantepenaeus aztecus) and juvenile and adult Spanish mackerel (Scomberomorus maculatus). Therefore, references to all life stages of pink shrimp, juvenile gray snapper and stone crab should be eliminated from this section.

Guidance and procedures for implementing the 1996 amendments of the Magnuson-Stevens Fishery Conservation and Management Act (MSFCMA) (P.L. 104 - 297) were provided through interim final rules established by the NMFS in 1997 (50 CFR Sections 600.805 - 600.930). As set forth in the NMFS interim final rules, EFH Assessments must include: (1) a description of the proposed action; (2) an analysis of the effects, including cumulative effects, of the action on EFH, the managed species, and associated species by life history stage; (3) the Federal agency's views regarding the effects of the action on EFH; and (4) proposed mitigation, if applicable. If appropriate, the assessment also should include the results of an onsite inspection, the views of recognized experts on the habitat or species affects, a literature review, an analysis of alternatives to the proposed action, and any other relevant information. Although required by the NMFS interim final rules, there is no corresponding EFH Assessment in "SECTION 4 - ENVIRONMENTAL CONSEQUENCES".

NMFS-1

NMFS-2



440622/020135 J-1

NMFS-1: Pink shrimp, juvenile gray snapper and stone crab have been eliminated from the EFH discussions.

NMFS-2: (1) The proposed action is described in Section 2.4.
(2) An assessment of potential impacts to EFH has been added to Section 4 for each alternative and to the cumulative impacts section (Section 4.8).
(3) The views of the USACE regarding the effects of the action on EFH will be presented in the Record of Decision. (4) Mitigation is discussed in

Section 4.2.15.5.

The consultation requirements in the MSFCMA direct Federal agencies to consult with NMFS when any of their activities may have an adverse effect on EFH. The EFH rules define an adverse effect as "any impact which reduces quality and/or quantity of EFH...[and] may include direct (e.g., contamination or physical disruption), indirect (e.g., loss of prey, reduction in species' fecundity), site-specific or habitat wide impacts, including individual, cumulative, or synergistic consequences of actions." Section 305(b)(4)(A) of the MSFCMA requires that NMFS provide EFH Conservation Recommendations for Federal agency action or permit that would result in adverse impacts to EFH. However, the DEIS does not contain sufficient information as required by the EFH interim final rules for NMFS to provide EFH Conservation Recommendations to the Corps of Engineers (COE). Therefore, to comply with the EFH consultation requirements either: 1) the EFH assessment in the DEIS needs to be significantly revised to include a complete EFH assessment in the Final EIS and the COE must address any EFH Conservation Recommendations that NMFS may offer before developing a Record of Decision or issuing a permit; or 2) the COE may provide NMFS with a separate and complete EFH assessment prior to the publication of the Final EIS.

Section 4 - ENVIRONMENTAL CONSEQUENCES

4.2 SHOAL POINT - APPLICANT'S PROPOSED SITE

This section should include a detailed assessment of the proposed project impacts to EFH and Federally managed species. See the above comments for Section 3.14.8.

4.2.15 Aquatic Ecology

This entire section contains contradictory statements, is deficient in a true assessment of impacts to aquatic ecology and is poorly written. In fact, the first five sentences of the second paragraph are confusing and of little information concerning impacts to aquatic resources. For clarity, we recommend that the first five sentences of this paragraph be deleted. We also recommend that entire section be significantly revised to describe the project impacts to the aquatic environment in the Final EIS in order to be consistent with the requirements of the National Environmental Policy Act (NEPA).

For example the first sentence states, "The immediate area of Shoal Point provides little habitat for commercial or recreational fish species (GLO, 1996b)." This statement is not even consistent with the affected environment descriptions provided in section "3.14 AQUATIC ECOLOGY" provided in the DEIS. If the statement is supposed to be about the Shoal Point placement area, it is a terrestrial habitat and should not be covered in this section. Either way, we recommend that this sentence be deleted in the Final EIS. Another example is the statement that, "Salinity effects are not anticipated ..." followed two sentences later by, "Most infaunal organisms in the area are relatively tolerant of salinity fluctuations (since they are estuarine) and would remain unaffected by any salinity changes related to dredging activities."

2

440622/020135 J-2

NMFS-3: The EFH assessment has been revised for each alternative.

NMFS conservation recommendations for EFH will be included in the ROD.

NMFS-4: In Section 4.0, a separate section detailing EFH impacts has been added to each alternative.

NMFS-3

NMFS-5 and **NMFS-6**: The impacts analysis for aquatic ecology at the Shoal Point alternative, Section 4.2.15, has been revised as recommended. Sections regarding potential aquatic ecology impacts for each alternative have also been revised in Section 4.0.

NMFS-4

NMFS-5

NMFS-6

The proposed dredged material placement plan will have significant permanent and temporary effects on aquatic resources. Specifically, over 100 acres of bay habitat available for aquatic life use will be converted to uplands by levee construction. There will also be a significant increase in turbidity in and around the placement areas during levee construction. Increased turbidity affects primary productivity, feeding rates of filter feeding organisms and can foul gills. Fluid mud flows resulting from the levee construction may smoother benthic infauna and will change the sediment composition around the placement areas, potentially affecting benthic infaunal community composition. While the beneficial use sites are being filled and dewatered, the area within them will no longer be available for aquatic organism use. Even after the beneficial use sites are opened to the tides, it may take several years before the man-made marshes are as productive as the open water they replaced. Even though it is anticipated that the beneficial uses plan will result in an net benefit to aquatic resources, if properly planned, constructed and managed, the Final EIS must address the adverse impacts associated with the proposed project in order to be consistent with NEPA.

APPENDIX A - CLEAN WATER ACT SECTION 404/RIVERS & HARBORS ACT SECTION 10 PERMIT APPLICATION

Sheet 10 - We could find no records of historic seagrass growth in Swan Lake and do not believe that the mitigation area would be currently support seagrasses. Therefore, the mitigation plan should be revised to delete all references to seagrass. Swan Lake historically was a shallow secondary embayment fringed by Spartina alterniflora marshes. Any mitigation plan that involves restoration at Swan lake should only target the restoration of elevations suitable for the growth of Spartina alterniflora, not other high marsh species. Additionally, the plan view is not to scale, so we were unable to determine the exact width of the marsh channels or marsh areas. Recent studies have shown that transient fishery use of Spartina alterniflora marshes in the western Gulf of Mexico marshes drops off significantly within three to four meters of a marsh edge. Therefore, we recommend that: 1) the mitigation plan be revised to target the restoration of Spartina alterniflora; and 2) the tidal marsh channels be designed so that all marsh areas are within ten meters of a marshwater interface (edge), rather than designing the marsh to be a certain percent open water.

Sheet 11 - Parameter "4." should set the vegetative coverage goal for two years, rather than three years as proposed by the applicant. It has been our experience that two years is typically a sufficient amount of time to achieve 70 percent vegetative coverage of Spartina alterniflora in the Galveston Bay system and has been the mitigation standard in Texas for over 15 years. A permit condition should be added that requires the applicant investigate why the target vegetative coverage was not achieved after two years and to take any corrective actions necessary to achieve the mitigation goals.

NMFS-7: The impacts analysis for aquatic ecology at the Shoal Point alternative, Section 4.2.15, has been revised as recommended. Sections regarding potential aquatic ecology impacts for each alternative have also been revised in Section 4.0.

NMFS-8: The requested changes have been made. It should be noted, however, that the applicant proposes to include an area of high marsh approximately 50 feet wide at the toe of the access road along the edge of Swan Lake. This high marsh would transition to the low marsh and would be an exception to the request that all marsh areas are within 10 meters of

a marsh-water interface.

NMFS-9: A minimum of 70% areal coverage three years after planting is standard USACE condition.

NMFS-8

NMFS-9

3

APPENDIX B - DREDGED MATERIAL MANAGEMENT PLAN (DRAFT REPORT) SHOAL POINT CONTAINER TERMINAL BERGER/ABAM ENGINEERS, INC.

6.4 Beneficial Use Sites

Pg 17 - The first sentence of the section should be revised to state, "The intent of the BUS is to create intertidal marsh habitat to produce an overall net benefit to the continued production of fish and wildlife resources.

Pg 18, par 2 - The last sentence should be revised to state, "Due to potential sea level rise and/or subsidence in the area, the final BUS interior grade elevations will be developed from an elevation survey of a nearby reference marsh prior to the final filling of each new marsh cell."

6.4.1 Swan Lake

For clarity, the text should be revised to indicate that only new work clays will be used in the restoration of Swan Lake.

Part D - Beneficial Use Sites

Since monitoring and maintenance of the beneficial use sites throughout the 50-year project life are vital to the ability of the project to produce the planned net environmental benefits, NMFS has been working closely with the applicant's agents and other Federal and state natural resource agencies to develop a monitoring and management plan for the project. In August 2001, NMFS provided Berger/Abam, Inc., draft monitoring criteria developed by an interagency team of biologists, which have been incorporated into the proposed Dredged Material Maintenance Plan. However since the time of this submission, we have continued to review and revise the criteria to make them easier to implement and more meaningful. The following area recommended revisions to those criteria:

Figure 5 - Stabilization of Dredge Volume

Change the Goal to "Minimize loss of dredged material from the beneficial use sites."

Change Performance Standard 2 to "Marsh loss should be no more than 30% of the initially constructed marsh area for the life of the project."

Add the following to Monitoring Method 1, "Conduct aerial photography within 60 days post-construction. Topographic surveys may be required if dredge fans are present."

Add the following to remedial Action1, "Corrective measures such as dredging to remove the fan or vegetative plantings may be required to mitigate for the unplanned dredge fan."

NMFS-10: The requested change has been made.

NMFS-11: The requested change has been made; however, the initial phrase ("Due to... in the area") has been deleted so that the sentence begins with "The final BUS..."

NMFS-10

NMFS-11

NMFS-13

NMFS-14

NMFS-15

NMFS-16

NMFS-12: The requested change has been made, along with the provision that other materials could be used if, through coordination with the natural resource agencies, they are determined appropriate for success of the marsh.

NMFS-13: The requested change has been made.

NMFS-12 NMFS-14: The requested change has been made; however, "marsh" has been changed to "BUS" to maintain consistency throughout the DMMP.

NMFS-15: The requested change has been made.

NMFS- 16: The following statement has been added: "Consider corrective actions such as dredging to remove the fan or additional vegetative plantings to mitigate for the unplanned dredge fan."

4

Figure 7 - Vegetation

Revise the Goal to, "Use dredged material to create as marsh similar to nearby marshes, while minimizing impacts to other ecologically important habitats.

Revise Performance Standard 2 to, "No more than 20% of total vegetative cover, inclusive of bare ground, will be high marsh species such as..."

Revise Monitoring Method 1 to, "Conduct site visits annually with resource agencies staff to determine species present and extent of vegetative coverage."

Revise Remedial Action 2 to, "Consider adding additional material if site is too low to support desired vegetation. Consider excavation and vegetative plantings if there is too much high marsh. Consider enhancing tidal exchange."

Figure 9 - Hydrology

Revise Goal to, "Achieve target elevations necessary to permit intertidal fluctuations of bay waters within the BUS."

2. DESIGN GUIDELINES

Pg 32, Par 1 - Revise first sentence to state, "The intent of the BUS is to create intertidal marsh habitat to produce an overall net benefit to the continued production of fish and wildlife resources,"

Pg 32, Par 3 - The last sentence should be revised to, "Due to potential sea level rise and/or subsidence in the area, the final BUS interior grade elevations will be developed from an elevation survey of a nearby reference marsh prior to the final filling of each new marsh cell."

2.1 Selection of Reference Marshes

This whole section should be revised. Random selection of a natural marshes could lead to the selection of a highly degraded marsh as the reference. This is unacceptable to NMFS, since the whole concept of the beneficial uses plan is to trade one type of EFH (open water) for another hopefully more productive type of habitat (estuarine emergent marsh). The selection of the natural reference marsh(es) should be based upon identification of high quality marsh habitat by natural resource agency personnel in conjunction with the COE and the project sponsor.

NMFS-17: The requested changes have been made; however, "create a marsh" has been changed to "create a BUS".

NMFS-18: The requested changes have been made.

NMFS-19: Revised to read, "Conduct annual site visits with local resource agency personnel to determine species present and extent of vegetative cover."

NMFS-20: Revised to read, "Consider adding additional dredged material if site is too low to support desired vegetation. Consider excavation and vegetative plantings if area is too high. Consider enhancing tidal

NMFS-21: The requested changes have been made.

NMFS-22: The requested changes have been made.

NMFS-23: The requested change has been made; however, the initial phrase ("Due to... in the area") has been deleted so that the sentence begins with "The final BUS...".

NMFS-24: This section has been revised to indicate that natural resource agency personnel will be involved in the review and approval of reference marshes.

NMFS-24

NMFS-17

NMFS-18

NMFS-19

exchange."

5

2.5.2 Dredged Material Placement Techniques

Add the following sentence to the end of the paragraph, "Prior to the design and construction of each successive BUS site, a review of the "lessons learned" from the previous marsh cells should be reviewed to refine design parameters and refine construction techniques."

2.6 Surface Elevations

The sentence should be revised to, "Due to potential sea level rise and/or subsidence in the area, the final BUS interior grade elevations will be developed from an elevation survey of a nearby reference marsh prior to the final filling of each new marsh cell."

Thank you for your consideration of our recommendations. If we may be of further assistance. please contact Mr. Rusty Swafford of our Galveston Facility at (409) 766-3699.

Andreas Mager, Jr.
Assistant Regional Administrator
Habitat Conservation Division

NMFS-25: The requested changes have been made.

NMFS-26: The requested changes have been made; however, the phrase "Due to... in the area," was deleted so that the sentence begins with "The final BUS...," and "each new marsh cell" was changed to "each BUS" to maintain consistency throughout the DMMP.

NMFS-26

NMFS-25



United States Department of the Interior FISH AND WILDLIFE SERVICE

Division of Ecological Services 17629 El Camino Real, Suite #211 Houston, Texas 77058-3051 281/286-8282 / (FAX) 281/488-5882



FWS1-1

FWS1-2

February 21, 2002

Colonel Leonard D. Waterworth Galveston District, Corps of Engineers Attn: Regulatory Branch, Sharon Maozella Tirpak P.O. Box 1229 Galveston, Texas 77553

Dear Colonel Waterworth:

The Public Notice for Permit Application No. 21979 would permit the City of Texas City to construct the Shoal Point Container Terminal in three phases adjacent to the Texas City Channel on Shoal Point, an active dredged material placement area in Galveston County, Texas. This work would require the deepening of the Texas City Channel to -45 feet MLT and construction of a contiguous wharf area and turning basin generating 11 million cubic yards of material which would be used for beneficial uses. The access roadway to the site and the container yard would fill 13.34 acres of inter-tidal marsh and 9.7 acres of shallow open water for which 45 acres of wetlands would be constructed in the northern portion of Swan Lake. In addition, 357 acres of open water would be filled to construct a beneficial use site to replace the disposal capacity lost for Texas City Channel maintenance. Six additional dredged material placement areas are to be constructed over fifty years using material from incremental channel deepening, wharf dredging, and turning basin construction. These will also hold maintenance material until target elevations are reached and marsh grass is successfully established.

The revised Department of the Interior Manual Instructions (503 DM 1), dated August 3, 1973, assigns responsibility for Department of the Interior coordination and review of Department of the Army permit applications to the U.S. Fish and Wildlife Service. Our comments are provided in accordance with these instructions and with the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661, et seq.).

The proposed access road will impact approximately 13 acres of intertidal marsh. The 0.48-acre area, located adjacent to Loop 197, may have submerged aquatic vegetation and is highly valuable habitat for a variety of fish and wildlife. One to two hundred birds can be seen utilizing this area on a daily basis. In addition, rails were observed feeding in this marsh and are known to nest in the same area in which they feed. We do not believe any mitigation offered would be acceptable for the loss of this 0.48-acres of marsh. In addition, the Service's interpretation of the access road footprint (see sheet 14) overlayed on the Virginia Point USGS 1995 DOQQ shows the impacts to be grater than 0.48-acres.

Recent studies contracted by the Galveston Bay National Estuary Program¹ found that Galveston Bay has lost over 34,000 acres of wetlands from 1950 to 1989 and the Virginia Point USGS quadrangle map (containing the project site) has suffered the greatest wetland loss of any USGS quadrangle. No efforts have been made by the applicant to avoid or minimize impacts to these wetlands. During the preparation

FWS1-1: Comments noted. The following procedure was followed to determine potential wetland impacts from the proposed access road alignment. A wetland delineation was performed and wetland boundaries were staked. USACE personnel verified the stake locations in the field. Staked areas were surveyed by a professional land surveyor. The proposed access corridor was then electronically overlayed on the surveyed wetland area coordinates and the potential impacts to wetlands were calculated. Photos were checked to compare acreage values and no discrepancy was identified. The surveyed wetland delineation (see Appendix A, Sheet 12) indicated 0.581 acres (0.015 and 0.566 acres) of open water and 0.479 acres of wetlands would be impacted adjacent to Loop 197 by the proposed access road.

No submerged aquatic vegetation (SAV) was observed in the open water area associated with these wetlands during the wetland delineation or the field verification by the USACE. The USACE believes that impacts to this marsh habitat can be mitigated.

FWS1-2: Several alternatives were considered by the applicant in the alignment of the access corridor and other project features. Many of the alignments that were considered to be feasible from an engineering standpoint were undesirable from an environmental perspective. As a result they were eliminated from further consideration prior to submittal of the permit application.

For example, early in the permit application preparation process, an alternative was considered to build an intermodal facility on Shoal Point. In order to construct the corridor, the Galveston County Discharge Canal was proposed to run through a viaduct under the proposed access corridor. Further evaluation by the applicant determined that the environmental, hydraulic and monetary issues associated with the intermodal facility were not warranted and the alternative was eliminated from further consideration.

Several other options were identified and considered. One of the proposed alternatives was to cross Swan Lake with a trestle bridge. This alternative was eliminated because of environmental considerations.

¹White, W.A. T.A. Tremblay, E.G. Wermund, Jr., and L.R. Handley. Trends and status of wetland and aquatic habitats in the Galveston Bay system, Texas. The Galveston Bay National Estuary Program Publication (GBNEP-31):225p.

To minimize potential impacts to wetlands and Swan Lake, the current alternative was proposed and investigated. This route uses upland areas on the discharge canal levee to the extent feasible, with some wetland impacts at the edge of Swan Lake (where the road footprint exceeds the upland levee area) and near Loop 197. On February 27, 2001, representatives of the USACE, TCIT, Berger/ABAM, and PBS&J met on site with representatives of FWS, NMFS, TPWD and GLO to discuss the wetland impacts on the edge of Swan Lake and the need to offset the access road at the connection with Loop 197. An offset from the levee along the canal was necessary because if the road remained on the levee all the way to Loop 197, the intersection would occur at the Loop 197 bridge over the canal, which is not acceptable from an engineering or practicability standpoint. The offset was minimized to the extent feasible, and the loss of the impacted wetland areas is considered unavoidable. These losses are accounted for in the calculation of wetland mitigation for the project.

The proposed access road alignment was chosen to minimize impacts to wetlands and wildlife habitat. Moving the currently proposed corridor would result in even more impacts to wetlands, and consequently wildlife habitat.

Colonel Leonard D. Waterworth Attn: Regulatory Branch, Sharon Manzella Tirpak February 21, 2002

of the DEIS the applicant stated the access road would be constructed over the Galveston County Discharge Canal, however, this is not presented in the proposed permit plans or the DRIS. We strongly recommend the access road be constructed avoiding all intertidal marsh located along the south side of the proposed road.

Shoal point is a placement area which was once the focus of habitat creation within and around the periphery by installing openings and planting marsh grass, all which failed completely and for which no remediation was ever required. Whether the beneficial uses sites proposed for this project become beautiful, calm inter-tidal marsh habitat or garbage dumps in the bay is going to depend upon the degree of planning, commitment, and effort on the part of the applicant. We do not see this yet in the permit application. There are no specific promises as to how much marsh will be established in each placement area, what contingencies are promised, and any specific design features that the Corps can enforce over the next fifty years.

We like the ideas and concepts in this project and the efforts so far to demonstrate good faith in carrying out this work, but we do not believe the permit is detailed enough to be enforceable; the success of pilot marsh efforts on the Houston Ship Channel have not been completed to the satisfaction of the Service and, we believe, other environmental agencies.

The Service requested several important environmental protection features for the Dredged Material Management Plan to be included in the project. We do not see these in the public notice. These are:

It is very important to maintain a sufficient amount of open water within the sites to replicate natural marsh functions. The current sites constructed as part of the Houston Ship Channel project are problematic due to poor circulation of water throughout the created marshes. Circulation should be established by keeping the sites small and creating more edge (under 200 ac in size), creating open water channels, and protecting or creating marsh and circulation channels at existing shorelines; i.e., constructing sites slightly offshore where they do not abut land masses.

All Swan Lake marsh construction both as mitigation and as a beneficial uses site should be completed in Phase I. A detailed plan is needed for the construction of the marsh within Swan Lake since it already contains sensitive habitat and more damage than good could be done without proper care including damage to the existing marsh habitat as well as the small shell islands located along the east edge should not be adversely impacted.

Fluid Mud Flows (FLUMF) are not addressed in the public notice or the DEIS. The Service is concerned that FLUMF during and after BUS levec construction will have an adverse effect on benthic organisms and on areas that may have potential for oyster reef growth. The Service recommends a FLUMF study and monitoring plan be developed for the proposed BU sites. The monitoring plan should be modeled after the Houston-Galveston Navigation Channel Contract No. 4, Dredging Upper Bay, Atkinson Levec Fluid Mud Flow Report, December 2001, prepared by Turner Collie & Braden Inc. for the Port of Houston Authority and the U.S. Army Corps of Engineers. A compensation plan should be implemented for impacts which may occur to benthic organisms and oyster/shell substrate in the surrounding area.

FWS1-3 & 1-4: Comments noted. Coordination with NMFS and other agencies has been an ongoing process in the development of the DMMP, especially in regards to monitoring and maintenance of the Beneficial Use sites. Modifications to the DMMP (Draft Report), (Appendix B) have been made per the request of NMFS and other agencies. See comments and responses to NMFS-13 through NMFS-26 for details regarding these changes. Ultimately, all BUS activities would be reviewed and overseen by the USACE.

FWS1-5: Based on input from NMFS (see response to NMFS-8), the mitigation plan has been revised to specify that the tidal marsh channels will be designed so that all marsh areas are within ten meters of a marshwater interface.

FWS1-6: Only 3 million yards of material would be available for use during Phase I. This is insufficient material to complete the SPBUS1 levees, Swan Lake mitigation site, Phase I project site development, and the entire Swan Lake restoration project. Also see responses to EPA-9 and EPA-10.

FWS1-7: The comment notes that Fluid Mud Flows (FLUMF) are not addressed in the DEIS. This has been corrected by noting and quantifying the potential effect in Section 4.2.15.2 of the FEIS. Essentially, this discussion recognizes that in the course of building Beneficial Use site levees, some of the material being discharged would be relatively fine and thus tend to not settle immediately on the levee. The amount of these fines would be a function of the characteristics of the dredged material and the pumping distance. With a short distance, more of the material would be in clay balls that settle rapidly. With a long distance, more of the cohesive new work material would be broken into fines with poor settling characteristics.

The December 2001 FLUMF report on the Atkinson Levee on the Houston Ship Channel suggested that a distance ranging from about 1,400 feet to about 2,500 feet from the levee center might be affected by fines to a depth of less than 2 inches. The report also notes some difficulty in distinguishing between the existing sediment and new FLUMF material. The affected area would experience a short-term habitat disruption following Beneficial Use site levee construction, but recolonization of the sediments by infaunal communities is expected to occur over a 3-12 month time period. In addition, any areas of hard bottom within the 2,500 ft swath could be buried and thus not be suitable for oyster habitat. However, this FLUMF material

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tends to not settle easily and thus can easily be resuspended by larger wind waves. It is likely that areas with harder bottom have sufficient wave energy to maintain that condition and would revert to that condition after dredging is complete. Areas that would be shielded from wave energy, such as the one to the northwest of BUS3, would probably experience less wave scour. In this case the bottom would tend to accumulate more soft sediments, independent of the FLUMF process.

The USACE typically does not require compensatory mitigation for impacts related to creation of Beneficial Use sites because of the habitat value associated with beneficial uses as compared to traditional placement of dredged material (i.e., in upland placement areas).

Colonel Leonard D. Waterworth Attn: Regulatory Branch, Sharon Manzella Tirpak February 21, 200/2 Page 3

This project is vast, and its time frame for completion is two generations away. The beneficial use sites must be successfully managed and maintained throughout the life of the project. We see no reason why the Corps of Engineers does not require a bond to guarantee that, should the joint venture on this effort fail, there will be money available to complete projects begun but not yet finished.

We are simultaneously providing comments on the draft EIS which includes a Dredged Material — Management Plan being worked on in coordination with conservation agencies. We believe formal coordination should continue over the life of the project as a permit requirement and key decisions be agreed upon by the participants before they are approved by the Corps for implementation to fulfil permit commitments. Our comments on the draft EIS will reflect the concerns expressed above and recommend that the EIS not be approved for acceptance until these matters are included as commitments for environmental protection.

Thank you for the opportunity to comment on this permit application. If you have any questions please contact me or Moni DeVora at 281/286-8282.

Acting Project Leader, Clear Lake ES Field Office

c.

Environmental Protection Agency, Marine & Wetlands Section 6WQ-EM, Dallas, TX
Texas General Land Office, La Porte, TX
Coastal Permitting Assistance Office, Pat Alba, NRC, Corpus Christi, TX
National Marine Fisheries Service, Habitat Conservation Division, Galveston, TX
National Park Service, Southwest Region, Santa Fe, NM

Texas Natural Resource Conservation Commission, Watershed Management Div., Austin, TX

Texas Parks and Wildlife Department, Austin, TX

Texas Parks and Wildlife Department, Resource Protection Branch, Houston, TX

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FWS1-8: The USACE will review and oversee the mitigation area and Beneficial Use site construction.

FWS1-9: Comment noted. See responses to NMFS-19 and NMFS-24.

FWS1-9

FWS1-8



United States Department of the Interior FISH AND WILDLIFE SERVICE

Division of Ecological Services 17629 El Camino Real, Suite #211 Houston, Texas 77058-3051 281/286-8282 / (FAX) 281/488-5882



February 21, 2002

Colonel Leonard D. Waterworth Galveston District, Corps of Engineers Attn: Regulatory Branch, Sharon Manzella Tirpak P.O. Box 1229 Galveston, Texas 77553

Dear Colonel Waterworth:

We have reviewed the Draft Environmental Impact Statement (DEIS) for the City of Texas City's Proposed Shoal Point Container Terminal, Galveston County, Texas.

General Comments

The DEIS adequately compares environmental impacts between alternative sites. Based upon what the DEIS has presented, we believe Shoal Point is one of the least environmentally damaging alternatives. However, we believe that the proposed impacts to Shoal Point can be minimized by shifting the access road to the north and submitting detailed restoration plans for Swan Lake. In addition, we are concerned with the success of the proposed beneficial use sites (BUS) and guarantees that the proposed project and mitigation will be completed.

The beneficial use sites created for the Houston Ship Channel are problematic due to poor circulation, loss of material outside of the BUS foot print, and impacts caused by fluid mud flows to the surrounding area. A list of concerns was submitted in a letter dated July 10, 2001, during the preparation of the DEIS, however, most of these concerns have not yet been incorporated into the DIES.

Specific Comments

Roadway Traffic Impact Analysis, Section 4.2.2, Page 4-35

The Service has received letters from the residents of Omega Bay who strongly oppose the proposed development of the container terminal facilities at Texas City due to air quality and noise effects caused by the increase in truck traffic. Alternate routes to the terminal should be submitted with supporting documentation demonstrating which route is the least environmentally damaging to the surrounding neighborhoods.

FWS2-1: Comments noted. Responses to General Comments are provided below under Specific Comments. Also see response to FWS1 letter.

FWS2-2: In response to public comments received from many residents of communities located near Exit 7 on IH 45, public officials representing Galveston County and the cities of Texas City and La Marque have initiated discussions with TxDOT regarding the possibility of developing an alternative route for trucks to use as access between the proposed container terminal at Shoal Point and IH 45. Also see response to FL1-1 (Form Letter 1 in private citizen comment responses).

FWS2-1

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Colonel Leonard D. Waterworth Attn: Regulatory Branch, Sharon Manzella Tirpak February 21, 2002 Page 2

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FWS2-5

Habitat Changes, Section 4.2.10.6, Page 4-59 and Vegetation, Sec. 4.2.12, Page 4-62

We strongly recommend the 0.48-acre of wetlands located adjacent to loop 197 be avoided. The Service's interpretation of the access road footprint (see sheet 14) overlayed on the Virginia Point USGS 1995 DOQQ shows the impacts to be grater than 0.48 acres. No efforts have been made to avoid or minimize impacts to the these wetlands. We believe there are more than 0.48-acre that will be impacted by the access road. One to two hundred birds can be seen utilizing this area on a daily basis. This includes ducks, colonial waterbirds, and shorebirds. In addition, rails are seen frequently feeding in this estuary and are know to nest in the same area in which they feed. This area may contain submerged aquatic vegetation (SAV) and is highly valuable habitat for a variety of fish and wildlife. We do not believe Swan Lake will support SAV growth and therefore do not believe any mitigation would be acceptable to replace this habitat once it is lost. The applicant should provide alternatives for construction and orientation of the access road.

Terrestrial Wildlife, Section 4.2,14, Page 4-63

The DEIS states "construction activities might result in the direct destruction of those organisms not mobile enough to avoid construction equipment. These would include several species of animals and if the construction takes place during the breeding season, the young of some species, including nestling and fledgling birds". Migratory birds (e.g., waterfowl, shorebirds, passerines, hawks, owls, vultures, falcons) are afforded protection under the Migratory Bird Treaty Act (MBTA)(40 Stat. 755; 16 U.S.C. 703-712). It is unlawful "by any means or manner, to pursue, hunt, take, capture, [or] kill" any migratory bird, part, nest or egg of any such bird except as permitted by regulation. The implementing regulations contain no express authority for a permitting system for unintentional take, but rather focus on activities where killing or capturing the birds is the purpose of the take activity.

The Service strives to work with persons or entities in the modification of plans or designs so that the take of birds is eliminated, if possible. As an example, we recommend prohibiting all activity within 1500 feet of active colonial waterbird nesting areas from February 15 to September 1. The implementation of this restriction would ensure that your project does not violate the MBTA.

Although Shoal Point is not an officially recognized historic nesting site recorded in the Texas Colonial Waterbird Census database, nesting by colonial waterbirds still could occur there and all necessary precautions must be made to avoid killing nesting birds.

Appendix B

Dredge Material Management Plan (Draft Report) for Shoal Point Container Terminal

Beneficial Use Sites, Section 6.4, Page 17

Recommendations made for the first draft of the Dredge Material Management Plan (DMMP) have not been implemented into the proposed DMMP in the DEIS. Please review the letter dated July 10, 2001 and see additional comments made below.

FWS2-3: See responses to FWS1-1 and FWS1-2.

FWS2-4: Section 4.2.14 has been revised to include FWS recommendations for avoiding impacts to migratory birds. As a result of this comment letter and the EIS process, the applicant has been made aware of his obligations with regard to the Migratory Bird Treaty Act.

FWS2-5: The 10 July 2001 letter is included in Appendix H. A summary of the concerns expressed in the letter follows:

(1) Oyster reefs should be avoided. If reefs cannot be avoided then mitigation should be conducted. In addition, oysters within 1000 feet of the proposed BUS may be damaged due to siltation and mudflows.

Response: Field truthing was conducted by resource agencies during development of the Draft DMMP. The results indicated that north of SPBUS1, the potential oyster habitat consists of shelly mud. The shelly mud had benthic organisms to support oyster habitat but no oyster reef was found. Regardless, to minimize potential impacts, SPBUS1 was located 1000 feet northeast of the shelly mud found near Swan Lake. The USACE typically does not require compensatory mitigation for impacts related to creation of Beneficial Use sites because of the habitat value associated with beneficial uses as compared to traditional placement of dredged material (i.e., in upland placement areas).

(2) Beneficial Use sites (BUS) – It is very important to maintain a sufficient amount of open water within the sites to replicate natural marsh functions. Keep the site small and create more edges; create open water channels; protect or create marsh and circulation channels at existing shorelines.

Response: See responses to EPA-9 and NMFS-8.

(3) Swan Lake – Swan Lake restoration should be completed during Phase I. A more detailed plan for marsh construction should be submitted.

Response: See responses to EPA-10, FWS1-6, and TNRCC1-2.

(4) Goals and Objectives – Changes to the goals and objectives were discussed in an interagency meeting on June 25, 2001.

Response: The results of these discussions are presented as flow charts in the revised DMMP.

Colonel Leonard D. Waterworth Attn: Regulatory Branch, Sharon Manzella Tirpak February 21, 2003Page 3

FWS2-6: See responses to EPA-10 and FWS1-6.

FWS2-7: See response to FWS1-7.

Swan Lake, Section 6.4.1, Page 18

The Service recommends Swan Lake restoration be completed in Phase I and that only new work material be used for the reconstruction of the marsh. A detailed restoration plan for Swan Lake must be submitted before the Service will approve the EIS or a 404 permit.

FWS2-6

Shoal Point, Section 6.4.3, Page 19

Fluid Mud Flows (FLUMF) are not addressed in the DEIS. The Service is concerned that FLUMF during and after BUS levee construction will have an adverse effect on benthic organisms and on areas that may have potential for oyster reef growth. The Service recommends a FLUMF study and monitoring plan be developed for the proposed BU sites. The monitoring plan should be modeled after the Houston-Galveston Navigation Channel Contract No. 4, Dredging Upper Bay, Atkinson Levee Fluid Mud Flow Report, December 2001, prepared by Turner Collie & Braden Inc. for the Port of Houston Authority and the U.S. Army Corps of Engineers. Depending on the results of the study a compensation plan may be necessary for impacts which occur to benthic organisms and oyster/shell substrate in the surrounding area.

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Summary

The DEIS has not yet dealt adequately with several important issues involving the reduction of impacts and protection of aquatic resources during construction. These should be addressed before the final EIS is approved or the D.A. Permit granted. Please contact Mora Devora at the Division of Ecological Service, Clear Lake Field Office, for additional coordination.

Sincerely,

Frederick T. Werner

ssistant Project Leader, Clear Lake ES Field

FEB 1 3 2002

826 Federal Building 300 E. 8th Street Austin, Texas 78701

February 11, 2002

USDOT

USDOT-1: No response required.

of Transportation
Federal Highway
Administration

U.S. Department

In Reply Refer To:

Texas Division

HB-TX

Draft Environmental Impact Statement Texas City's Proposed Shoal Point Container Terminal

Ms. Sharon Tirpak U.S. Army Corps of Engineers P.O. Box 1229 Galveston, Texas 77553

Dear Ms. Tirpak:

We have reviewed the above Draft Environmental Impact Statement and have no comments.

USDOT-1

Sincerely yours,

Gary N. Johnson, P.E.

Area Engineer

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY



REGION 6 1445 ROSS AVENUE, SUITE 1200 DALLAS, TX 75202-2733

MAR 2 0 2002

Colonel Leonard D. Waterworth District Engineer Galveston District U.S. Army Corps of Engineers P.O. Box 1229 Galveston, TX 77553-1229

Dear Colonel Waterworth:

In accordance with our responsibilities under Section 309 of the Clean Air Act, the National Environmental Policy Act (NEPA), and the Council on Environmental Quality (CEQ) Regulations for Implementing NEPA, the U.S. Environmental Protection Agency (EPA) Region 6 office in Dallas, Texas, has completed its review of the Draft Environmental Impact Statement (DEIS) for the proposed Shoal Point Container Terminal, Texas City, Texas.

EPA rates the DEIS as "EC-2," i.e., EPA has "Environmental Concerns and Requests Additional Information in the Final EIS (FEIS)." EPA has identified environmental concerns and informational needs to be included in the FEIS to complement and to more fully insure compliance with the requirements of NEPA and the CEQ regulations. Areas requiring additional information or clarification include: air quality and conformity certification, land use and zoning, coastal zone management, surface transportation, community infrastructure, noise, dredge material placement, socioeconomic, aesthetics, lighting and others. We suggest that the alternative selected be fully mitigated for those impacts that are unavoidable and that a mitigation plan be incorporated in the Record of Decision and made conditions to the Section 10/404 Corps of Engineers permit, as appropriate.

Our classification will be published in the Federal Register according to our responsibility under Section 309 of the Clean Air Act, to inform the public of our views on proposed Federal actions. Detailed comments are enclosed with this letter which more clearly identify our concerns and the informational needs requested for incorporation into the FEIS. If you have any questions, please contact Mike Jansky of my staff at 214-665-7451 for assistance.

EPA appreciates the opportunity to review the DEIS. Please send our office five copies of the FEIS when it is sent to the Office of Federal Activities, EPA (Mail Code 2252A), Ariel Rios Building, 1200 Pennsylvania Ave, N.W., Washington, D.C. 20460.

Sincerely yours,

Robert D. Lawrence, Chief

Office of Planning and Coordination (6EN-XP)

Enclosure

internet Address (URL) - http://www.epa.gov/earth1r6/

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DETAILED COMMENTS ON THE PROPOSED SHOAL POINT CONTAINER TERMINAL TEXAS CITY, TEXAS DRAFT ENVIRONMENTAL IMPACT STATEMENT (DEIS)

Background

The Shoal Point Container Terminal is proposed to meet a regional need for development of a containerized cargo gateway similar to the gateways established for the Pacific Rim at the ports of Los Angeles and Long Beach, California. The regional need is driven by significant growth in container traffic within the Texas Central Gulf region, as well as projected growth in the Latin American market. The proposed Shoal Point Container Terminal has the capacity to meet part of the regional capacity demands and to allow the Texas Central gulf region to remain a viable competitor in the containerized cargo market. In addition, the proposed Shoal Point Container Terminal has the capacity to relieve many of the landside constraints currently experienced by other container facilities in the Houston region and the greater U.S. port system.

Alternatives Evaluated

Seven alternatives were analyzed in this DEIS. They consist of the following:

No-Action Alternative

The No-Action alternative is equivalent to a Corps of Engineers (COE) denial of the permit for the facility. In the event of permit denial, no container terminal would be built at Shoal Point, and it is assumed for this EIS that no new container terminal facilities would be built to serve the Houston area. The market for containerized cargo in this region is expected to rise steadily over the next several years. While it is possible that other container terminal facilities would be constructed to meet this regional need, the uncertainties related to the size, location, and timing of such facilities lead to the approach used to evaluate the No-Action alternative in this DEIS (i.e., that no such facilities would be constructed). Under the No-Action assumption that no new container terminal facilities would be constructed in the Galveston Bay area, it is further assumed that the additional containerized cargo would most likely be transported into and out of the Houston area from other container terminals (e.g., New Orleans) via truck or rail.

Proposed Alternative - Shoal Point

Shoal Point is an active COE Dredge Material Placement Area (DMPA) for maintenance

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of the Texas City Channel, Texas City Turning Basin, Industrial Canal, Industrial Canal Turning Basin, and other areas maintained by the Port of Texas City Users Group. The proposed container terminal footprint would cover 400 acres. Part of the area corresponds to a 100-acre site originally known as Snake Island, but most of the area was built up as part of the COE's placement of dredged material on the area referred to as Shoal Point. The site currently consists of poorly consolidated dredged material. Approximately 51 acres of wetland habitats occur on the site, including approximately 13 acres of jurisdictional wetlands. During the construction of the terminal, the project site would undergo a consolidation program to minimize the amount of settlement that could occur after the terminal is in operation. The consolidation program would likely consist of the installation of wick drains, along with soil surcharge. No demolition of structures would be expected for this site.

Pelican Island Alternative

Pelican Island is an active, upland confined COE DMPA, located just north of and separated from Galveston Island by the Galveston Ship Channel. The 400-acre footprint for the terminal would be located on the northeastern corner of the island, with wharf frontage on the north side of the island, facing the Bolivar Roads channel. Part of this footprint would be located outside of the leveed DMPA in a lagoonal area that has no tidal inlet. The only apparent tidal influence occurs during seasonal events. Mitigation would be required for unavoidable impacts to approximately 7 acres of non-jurisdictional freshwater wetlands would be impacted by the land access corridor.

This alternative would require a new berthing area and entrance channel. No turning basin would be needed because of the configuration of the proposed entrance channel. All areas of dredging would be deepened to -45 feet Mean Low Tide (MLT). The berthing area would be approximately 6,000 feet in length and 200 feet in width. The berthing area and entrance channel would be located southwest of Bolivar Roads. An estimated 13.1 million cubic yards (mcy) of material would be dredged for the berthing area and entrance channel. This material would be used as fill for the terminal and placed into existing upland DMPAs or used in the creation of Beneficial Use areas. Placement of material in existing DMPAs would result in loss of DMPA capacity currently used for Bolivar Roads and the Gulf Intracoastal Waterway (GIWW).

Bayport Alternative

The Bayport alternative site is located along the western shore of Galveston Bay in Harris County, Texas, within the City of Pasadena's corporate boundaries. The terminal would be located on the southern side of the existing Bayport Ship Channel, a channel cut into the mainland just north of Red Bluff to serve existing industry.

All areas of dredging for the Bayport alternative would be deepened to -45 feet MLT. The Bayport Ship Channel (3.6 miles in length) is currently maintained to a depth of -40 feet

MLT. This alternative would require a new berthing area approximately 6,000 feet in length and 200 feet in width, located south of the existing Bayport Ship Channel. It is estimated that approximately 2.4 mcy of material would be dredged for the berthing area. The proposed turning basin would be 1,200 feet in diameter. It is estimated that approximately 0.4 mcy of material would be dredged during the construction of the turning basin. The current geometry of the Bayport Ship Channel would not be changed during the construction of the terminal. It is estimated that approximately 3.9 mcy of material would be generated during the deepening of the channel. The total, 6.7 mcy of dredge material, would be used as fill for the terminal and placed into existing upland DMPAs or used in the creation Beneficial Use areas. Placement of material in existing DMPAs would result in loss of DMPA capacity currently used for the Houston Ship Channel.

No intermodal yard would be expected for this alternative. It is anticipated that the majority of rail traffic would use the existing Barbours Cut intermodal yard facility (less than 10 miles from site). It is anticipated that two additional yards in the greater Houston area would experience a minimal amount of rail traffic originating from this terminal location.

Spillman's Island Alternative

Spillman's Island, an active COE upland confined DMPA, is located on the shoreline along the San Jacinto River on the western side of the Houston Ship Channel. No longer an island, Spillman's Island is located just south of the Fred Hartman Bridge (SH 146 river crossing). If constructed at this site, the terminal would be located within the City of La Porte and Harris County. The City of La Porte borders the City of Morgan's Point to the south.

All areas of dredging for the development of a container terminal at Spillman's Island would need to be deepened to -45 feet MLT. The Houston Ship Channel is scheduled to be deepened from -40 feet MLT to -45 feet MLT in this area by September 2002. The berthing area would be located southwest of the Houston Ship Channel. It is estimated that approximately 7.7 mcy of material would be dredged for the berthing area and channel. The proposed turning basin would be 1,200 feet in diameter and located on the opposite (eastern) side of the Houston Ship Channel. It is estimated that approximately 1.9 mcy of material would be dredged during the construction of the turning basin.

Roadway infrastructure is available at the site. It is assumed that the project would tie in with the existing network of roadway systems at the Barbours Cut terminal. No intermodal yard is expected for this alternative. It is anticipated that the majority of rail traffic would use the existing Barbours Cut facility. It is anticipated that two additional intermodal yards in the greater Houston area would experience a minimal amount of rail traffic originating from this terminal location.

Alexander Island Alternative

J-19

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Alexander Island, an active, upland confined USACE DMPA, is located along the San Jacinto River on the western side of the Houston Ship Channel, just north of the Fred Hartman Bridge (SH 146 river crossing). The terminal would be on the eastern side of the island with wharf frontage facing the Houston Ship Channel. The terminal would be located within the City of La Porte and Harris County.

All areas of dredging for the Alexander Island alternative would be deepened to -45 feet MLT. The Houston Ship Channel is scheduled to be deepened from -40 feet MLT to -45 feet MLT in this area by September 2002. This alternative would require a new berthing area and entrance channel to be located west of the existing Houston Ship Channel. Due to the configuration of the entrance channel, no entrance channel would be used as fill for terminal development and placed into existing upland DMPAs and/or potential Beneficial Use areas. Placement of material in existing DMPAs would result in loss of DMPA capacity currently used for the Houston Ship Channel.

Mitigation would be required for unavoidable impacts to approximately 6 acres of jurisdictional wetlands located along eastern and southern shorelines. These wetlands are outside of the levees surround the DMPA. Most are salt/brackish marsh and unvegetated shoreline. Natural, brushy areas, a small brackish-to-fresh pond, and a bird rookery also occur in the area to be impacted.

There is no current access to Alexander Island. A new four-lane access roadway with a new multi-span bridge (crossing Upper San Jacinto Bay) would be required for access to the project site. Improvements to existing roadways would also be required where the new roadway would terminate on the mainland.

No intermodal yard would be expected for this alternative. It is anticipated that the majority of rail traffic would use the existing Barbours Cut facility. It is anticipated that two additional intermodal yards in the greater Houston area would experience a minimal amount of rail traffic originating from this terminal location.

Cedar Point Alternative

The alternative site at Cedar Point is located on the northeast shore of Galveston Bay in Chambers County, Texas. The terminal would be located within the corporate limits of the City of Baytown. This alternative would require extensive dredging of new channel and deepening of the existing Cedar Bayou channel to provide deepwater navigation from the project location to the Houston Ship Channel. All areas of dredging for the Cedar Point alternative would be deepened to -45 feet MLT. Development of a container terminal in this location would require a new berthing area, a new deepwater channel, and a turning basin. The berthing area and turning basin would be located wholly within the mainland of Cedar Point. This footprint was chosen to avoid an active landfill and petroleum pipelines and wells.

Over 550 acres of undeveloped land, including upland and wetland forests, shrublands and grasslands would be converted to the port facility. Approximately 75 acres of primarily freshwater wetlands would be lost, including 6 acres of forested wetlands. However, only the estuarine shoreline wetlands (approximately 1 acre) would be considered jurisdictional under Section 404 regulations and require mitigation. Roadway access to the site would be available via FM 1405 and Beach Road (FM 2354). Beach Road would need to be realigned to accommodate the terminal location. Both roadways are two-lane arterials. They would both need to be improved to four lanes. No rail service is currently available at the Cedar Point site. The nearest rail spur is approximately 2.5 miles from the site. In the early years of the project, the container traffic destined for movement by rail would probably be distributed evenly between Barbours Cut, the UPRR intermodal yard, and th BNSF intermodal yard. It is assumed that a separate intermodal yard would be developed in the future.

Preferred Alternative

The Shoal point Alternative is the preferred alternative. It is discussed above in Section 1.2 of the DEIS.

DETAILED COMMENTS ON THE DEIS

Air Quality and Conformity Review Comments.

The City of Texas City has applied to the U.S. Army Corps of Engineers (USACE) for a Clean Water Act Section 404 permit and Rivers and Harbors Act Section 10 permit for dredge and fill activities related to the construction of a marine container terminal at Shoal Point in Texas City. The USACE has requested comments from EPA Region 6 on its conformity determination, since this project would be built in a "Severe-17" nonattainment area for ozone. The USACE's role in the project is the construction of the access road, the warf, and the portion of the container yard that is constructed over wetlands; and the dredging of the channel, berthing areas, and turning basin. According to our interpretation of 40 CFR Part 93, only a portion of the direct emissions associated with the construction of the project are the USACE's responsibility, with regard to a conformity determination. However, the DEIS considers both the direct and indirect emissions associated with the construction of the project and the indirect emissions associated with the operation of the project, and these emissions were also reviewed. EPA offers the following detailed comments on air quality and conformity related issues:

1. 40 CFR 93.158(a)(5)(A) and 30 TAC 101.30(h)(1)(E)(i)(I) require the Texas Natural Resource Conservation Commission (TNRCC) to make a certification (with public review) that the emissions associated with the construction, together with all other emissions in the nonattainment area, will not exceed the emissions budget specified in the applicable State Implementation Plan (SIP). We do not find such a certification from TNRCC supporting your draft determination. The determination is needed to meet the criteria in the rules for determining

EPA-1: By letter from the TNRCC to the USACE dated 18 March 2002, the TNRCC stated that it could provide a a positive General Conformity Analysis if the project sponsors made commitments to minimize certain project emissions and if these commitments are addressed in the FEIS (Section 4.2.1.2). On April 15, 2002, a meeting was held with the TNRCC, the USACE, and the project sponsors to discuss these commitments. The project sponsors provided a response to the TNRCC by letter dated August 30, 2002. Based on these commitments and other project information, the TNRCC issued a certification by letter dated September 9, 2002 that the construction emissions from the proposed project are accounted for in the applicable SIP. A copy of this letter is found in Appendix H-9 of the FEIS.

The FEIS and the Final General Conformity Determination have been enhanced to include the sponsor's commitments. The public participation and public notice requirements of the General Conformity Rules provide for public involvement by making the final general conformity documentation, including the TNRCC's final determination letter, public.

EPA-1

conformity. Please provided the requested documentation and certification in the Final (FEIS).

- 2. The Conformity Determination states on page 3-1 of the DEIS that "The use of electric dredging, where feasible, would essentially eliminate all emissions from these dredging activities." Since this requires the use of specialized equipment, and will be relied upon in part to enable the emissions subject to USACE responsibility to fall below the de minimis level for some years, its use must be Federally enforceable, as described in 40 CFR 93.160, and EPA's (July 13, 1994) General Conformity Guidance: Questions and Answers, page 12. The proper vehicle for this is the USACE's permit. Please document in the FEIS that such assurances will be provided as a condition to the USACE permit.
- 3. EPA is concerned if the build/no build analysis of the operations adequately considered the increased demand that would result from construction of the container terminal at Shoal Point. In particular, the USACE should address what new growth would occur as a result of the federal action, that would not be expected to occur without this project. Please explain fully in the FEIS.
- 4. EPA requests that the USACE document in the FEIS and verify with the State that the proposed project(s) at the port are consistent with the TNRCC's Houston/Galveston Nonattainment Area (HGA) plans for attainment. The rules require a determination of conformity to the approved State Implementation Plan (SIP), and the determination does seem to address the legally approved SIP. However, EPA recently approved TNRCC's SIP and is currently engaged with the TNRCC in continuing to study the HGA ozone nonattainment problem. Of potential concern is the level of operational emissions that will occur in the future due to the construction of the Bayport and/or Shoal Point Harbor projects. From information included with the Bayport DEIS, the total estimated operating emissions from this facility is projected for 2007 to be 973 tons per year (tpy) of NOx (2.6 tons per day (tpd) of NOx) and for 2025 and beyond the total is projected to be 4954 tpy of NOx (13.6 tpd of NOx). From information included with the Shoal Point DEIS, the total estimated operating emissions from this facility is projected for 2007 to be 876 tpy of NOx (2.4 tpd of NOx) and for 2026 and beyond the total is projected to be 2178 tpy of NOx (6.0 tpd of NOx).

The 2007 NOx emission estimates for each individual project are below the emission increase due to ship traffic that were included in TNRCC's SIP modeling. The USACE have indicated that both of the projects might actually be built. The combined emissions from both projects (2.6 + 2.4 = 5.0 tpd of NOx) is a significant amount. A copy of the final operating emission calculations should be provided to TNRCC so the information can be utilized in future SIP actions.

5. On page 4-31 of Volume 1 of the DEIS, the USACE outlines the mitigation measures that will be enacted in order to reduce the emissions associated with this project. These include emission reductions associated with the (1) MARPOL Treaty; (2) low sulfur diesel and truck

EPA-2: If the USACE issues a permit for this project, it would be conditioned to require the use of electric dredging, where feasible, for all dredging activities. A statement to this effect is included in the FEIS (Section 4.2.1.1).

EPA-3: As discussed in sections 4.1.19 and 4.1.20, if the proposed project is not built, no change in land use would be anticipated for the Shoal Point Site. However, residential, commercial, and public land uses in Galveston County and the region would likely increase proportionate to population growth trends.

EPA-2

EPA-3

EPA-4

It is expected that the growth associated with the construction and operation of the proposed project would be consistent with the projected growth for the area. The construction of the Shoal Point container terminal would create a number of short-term direct construction jobs. It is assumed that some segment of the local unemployed work force would fill the short-term construction positions. The project would also create a number of direct operations jobs resulting in inmigration of worker and families to the area. As discussed in Section 4.2.19.1 of the DEIS, housing, commercial and public land uses would be required to serve the projected maximum 890 inmigrant population of operations workers and their families. As this is a thriving metropolitan area, availability of existing services and facilities would minimize the impact of this growth.

As discussed in a letter from the TNRCC to the USACE dated September 16, 2002, addressing specific comments from the EPA relating to the SIP, the TNRCC confirmed that "secondary emissions resulting from growth in the region expected to occur as a result of the proposed container terminal have been accounted for in the HGA SIP. These emissions are inventoried in the vessel emissions inventory, non-road mobile emission inventory, and mobile emissions inventory. Growth of emissions has been projected based on anticipated growth in demand for container shipping and other non-road mobile growth factors. The December 2000 HGA SIP emissions inventory incorporated the results of a very detailed survey of emissions from construction equipment used at port facilities (such as cranes, forklifts, etc). Although growth of these emissions is not accounted for on a projectby-project basis, emissions from total non-road mobile sources, including port facilities, were grown to 2007 levels in the SIP. In addition, modelers from the Houston-Galveston Area Council (H-GAC) have verified that secondary growth in truck traffic due to the operation of the proposed

container terminal was captured in the Travel Demand Forecast Model, produced by the H-GAC. Data from the Travel Demand Forecast Model was then used as an input by the TNRCC to construct the Mobile Emissions Inventory which was incorporated into the December 2000 HGA SIP."

EPA-4: This issue was discussed by the USACE and the TNRCC during a meeting on Monday, 15 April 2002. In response, the TNRCC staff explained that in developing the SIP, the TNRCC has assumed growth in containerized traffic within the 8-county Houston Galveston Nonattainment Area. This growth is generally considered in the SIP for the entire HGA with no specific location or project identified. The TNRCC considers this project to be part of the anticipated growth in containerized cargo facilities in this area.

By letter dated September 16, 2002 (see Appendix H-9), TNRCC addressed the issue of air emissions from the proposed projects at Shoal Point and Bayport and the consistency of these project emissions with the Houston/Galveston Nonattainment Area SIP. In the letter, TNRCC confirms that secondary emissions resulting from growth in the region expected to occur as a result of both projects have been accounted for in the SIP. These emissions were included in the vessel emissions inventory, the non-road emissions inventory, and the mobile emissions inventory for the SIP. To summarize the response:

- The December 2000 HGA SIP, which contains the HGA area vessel emissions inventory, included a 5% per year NOx emissions growth allowance for emissions from container ships. This growth rate coincides with the estimated 4-6% rate of growth in demand (projected from 1998 2028) for container facilities discussed in Section 1.0 of the FEIS. TNRCC states that the SIP "takes into account growth of vessel emissions from increased container traffic to the magnitude that demand can support."
- On-shore emissions at container terminals, including emissions from equipment used at port facilities, were included in the SIP emissions inventory. According to the letter, growth of these emissions was not accounted for on a project-by-project basis. However, emissions from total non-road mobile sources, including those from port facilities, were grown to 2007 levels in the SIP.

 The Houston-Galveston Area Council verified that secondary growth in emissions from truck traffic due to the operation of the proposed container facilities at Shoal Point and Bayport were included in the Travel Demand Forecast Model for the HGA. Input from this model was used by TNRCC to develop the mobile emissions inventory in the SIP.

The letter further states that TNRCC "will continue to monitor the development of both ports to ensure that emissions do not exceed levels already accounted for in the SIP."

emissions required by EPA; (3) efficient scheduling; and (4) SIP controls including speed limit controls, auto inspections, cleaner diesel fuel, and the accelerated purchase of Tier 2/3 equipment. In addition, on page 4-30 and elsewhere of Volume 1, the DEIS mentions that innovative technology may be purchased under Texas Senate Bill 5 for use on this project. For any measures used to mitigate emissions that are subject to the conformity determination, the USACE should ensure that the provisions outlined in 40 CFR 93.160 are followed and that the particular reductions factored into the general conformity determination are enforceable as required. As stated above, the proper vehicle for this is the USACE's permit. In particular, if any emission mitigation measures are contemplated under Texas Senate Bill 5, the USACE should ensure that these mitigation measures are implemented regardless of the source of the funding. Such mitigation measures should be made conditions of the USACE permit and the Record of Decision Document. Please document this issue in the FEIS.

- 6. Beginning on page 4-45 of Volume 1, the DEIS discussed proposed intersection and roadway improvements that would have to be undertaken, in part due to the increased traffic from the construction of the container terminal at Shoal Point. However, it is not apparent from the information supplied whether the increased emissions from this additional construction were accounted for in either the DEIS or the Conformity Determination. Therefore, the USACE should demonstrate that either (1) these emissions were properly accounted for in both the Conformity Determination and the DEIS, or (2) that they are not subject to inclusion in the DEIS and the Conformity Determination. Please clarify in the FEIS.
- 7. Some of the tables in the JD Consulting document, "Air Emission Calculations, Proposed and Alternative Sites, For Draft Environmental Impact" that accompany the DEIS, list the category "Construction: Outside USACE Program Responsibility." The USACE should provide information that (1) completely describes the emissions in this category for all the tables that list it, and (2) justifies why it is out of the USACE's responsibility. Please provide such information in the FEIS.
- 8. The DEIS did not address the projected impact of the construction and operation of the Shoal Point terminal on the Particulate Matter (PM)-2.5 emissions of the Houston-Galveston area. Although EPA does not have a standard in place for PM-2.5, EPA believes that performing such an analysis would be beneficial. Please provide such information in the FEIS.

Wetland/Section 404 Region 6 Concerns

The main impacts with the preferred alternative would be the loss of 13 acres of wetland and filling of 1,050 acres of Galveston Bay bottom. The fill would occur in phases over many years. About 11 million cubic yards of material will be dredged over the project period.

Tidal marsh would eventually be created within each of the cells of the disposal areas. However, it appears that for some of the areas the levees would be constructed many years (about **EPA-5:** The estimate of emissions for the project included the use of appropriate emissions reduction methods to reduce emissions including equipment, operational, and regulatory restrictions. Emission reduction credits taken because of regulatory mandates such as SIP control requirements, EPA low sulfur diesel and diesel emission standards, or the MARPOL treaty are required by law. Therefore, it would be unnecessary to condition the USACE permit for these provisions. The project sponsors also have no ability to require or enforce such measures, except within the confines of the project. However, it seems appropriate to use the resulting emissions reductions in calculation of emissions for the project.

EPA-5

EPA-6

EPA-7

EPA-8

EPA-9

As stated in the letter from the project sponsors to the TNRCC dated August 30, 2002, the project sponsors have committed in writing that they will require the use of low NOx emissions technology on land-based diesel construction equipment. Construction contracts governing work occurring in calendar year 2005 and beyond will include language to require Tier 2/Tier 3 diesel equipment and add-on NOx control technologies, or more stringent requirements that might be in place at the time of construction. Contract documents will require contractors to apply for the SB 5 grants (or equivalent) to modify or purchase diesel equipment with low NOx diesel emissions technology. These commitments were required by the TNRCC as a condition of issuance of a positive general conformity determination.

Although inadequately funded, SB 5 is currently a part of the SIP and provides for a degree of emissions control credit assuming the use of this program in the HGA. In discussions with the project sponsors, the TNRCC stated that in the event that SB5 fails to procure a funding source, the TNRCC expects the project sponsors to show equivalent reductions to those incorporated in the Environmental Impact Statement either through NO_x reduction technologies purchased with other funding sources or by other approved means.

Copies of the sponsor's commitment letter and TNRCC's General Conformity Determination letter are included in Appendix H-9 of the FEIS.

EPA-6: The transportation conformity rules cover emissions from intersection and roadway improvement projects on public thoroughfares. The proposed transportation improvements in the Texas City area are listed in Table 4.2.2-5 of the DEIS. This listing was provided by the Houston-

Galveston Area Council and is included in the 2022 Metropolitan Transportation Plan. As discussed in Section 4.2.19 of the DEIS, the predominant impacts on traffic loads would be caused by regional growth, with some additional impact, primarily in the form of truck traffic, from the proposed project. Some improvements would be needed to accommodate projected traffic volumes, with or without the project, to maintain an acceptable level of service. It would not be appropriate to attribute the transportation projects solely to the Shoal Point project since they reflect projections of long-term cumulative growth.

By letter to the USACE, the Houston-Galveston Area Council also agreed that the HGA SIP incorporates transportation-related operating emissions due to projected growth in container traffic. According to the H-GAC, the project is accounted for in the region's currently approved Metropolitan Transportation Plan and associated conformity analysis. The conformity analysis used the latest information concerning the terminal's proposed truck-related operations. A copy of this letter is provided in Appendix H-9 of the FEIS.

EPA-7: For purposes of general conformity, the USACE determined that it was required to review only the construction emissions that would occur in the areas that the USACE has responsibility over. For the Shoal Point project, these areas include: construction of the access road and the wharf, the portion of the container yard constructed over wetlands, and the dredging of the channel and turning basin. The JD Consulting (JDC) document has been revised to provide more complete information describing the basis and emissions associated with activities covered by USACE responsibility and those that are not. The final emissions document will be submitted to the EPA with a copy of the FEIS and a copy will also be available as a reference document to the FEIS.

EPA-8: PM2.5 emissions calculations for the Shoal Point Container Terminal were developed and included in the revised JDC emissions document. The relative impact of the project PM2.5 emissions on the HGA was assessed by comparison to existing emissions in the area. This analysis is included in the FEIS (Section 4.2.1.1).

In assimilating the PM2.5 emissions information for the HGA, the US EPA database (AIRData Website) was accessed. This database appears to

provide more current (1999) and comprehensive emissions information than the TNRCC information that was provided in the DEIS. Therefore, for consistency with the source of the PM2.5 data, the EPA database was used as a basis for the tabulation of other emissions summaries in the FEIS.

EPA-9: Containment levees for these cells need to be made of constructible (i.e., new work) material (as opposed to maintenance material which is finer grained). Only the initial dredged material is suitable for this purpose. In addition, since the applicant would be removing capacity from the existing placement areas (cells) at Shoal Point, the levees for the new cells must be constructed in the early stages of the project in order to guarantee that replacement capacity has been provided.

Appendix A (Permit Application), Sheet 8 provides information on the proposed phasing of Beneficial Use site levee and cell construction. As indicated in Appendix A (and summarized below), the construction sequence provides for openings in levees for circulation and water exchange prior to placement of dredged material in the cell:

- 1) Build containment levees with new construction dredge material; shoreline protection provided as needed; openings in levees will allow circulation and water exchange inside cell.
- 2) Fill with dredge material and allow to consolidate (as indicated in the drawing on Sheet 8 of Appendix A, adjustable weirs would be installed during dredged material placement).
- 3) After consolidation, shape fill material to elevations appropriate to construct shallow water habitat.
- 4) Plant various types of diverse habitats; partially remove levees to provide water circulation/exchange; leave significant portions of levees in place, either emergent or submerged to provide stabilization/protection of shallow water habitat.

20) before the areas would be needed. This would cause substantial impacts to the bay bottom before it was necessary. We recommend that the cells be constructed only as they are needed. Any cells constructed before they are needed, i.e. contrary to our recommendation, should be have several openings to allow tidal circulation. We recommend that the restoration of Swan Lake marsh be done with the first material that becomes available from the project. This would restore 363 acres of wetlands at the earliest possible date.

Sheet 10 in Appendix A (Section 10/404 permit application) shows the conceptual mitigation site design. The legend indicates high marsh would comprise 20% of the site and low marsh would comprise 30%. The table on the same page shows these amounts as 30% and 40% respectively. We recommend that high marsh comprise no more than 20% of the total area and low marsh be at least 60%. The table also shows seagrass would comprise 10% of the area. The planting of seagrass on this scale in Galveston Bay is not recommend at this time. We recommend that the 10% area allocated for seagrass be planted as low marsh. Overall, we believe this is good design that would create a high edge-to-area ratio.

Finally, in Appendix B (Dredge Material Management Plan) Part D, we believe there is an error. In Figure 5 (following page 26), one of the performance standards states "BUS loss shall be no more that 70% of the initially constructed BUS area for the life of the project." We recommend the 70% be change to 30%. On Table 21 (page 37), there is a similar statement in the seventh performance standard from the top, which should read "Maximum loss of 30% of initially constricted habitat." Please address this issue fully in the FEIS.

Section 3.3 Noise

Typically, the affected environment should include more information than is presented in this section. This section covers only a rudimentary description of noise and noise measurement, an inaccurate definition of Leq (Leq is properly defined only over a specified time interval which is never discussed), the regulatory basis for analysis of road noise, and a short paragraph that indicates that noise modeling was done to estimate roadway noise. While baseline noise levels along roadways are presented in Chapter 4, it is customary to include baseline descriptions in Chapter 3.

For the Bayport DEIS, considerable attention was paid to the noise during construction and operation—concerns apparently raised at Bayport because of the proximity of residential areas to the site. In addition, ambient noise levels were also measured at other sites where noise was likely to be an issue. There is no discussion of noise associated with operations in this EIS, and the same concerns must undoubtedly arise in the minds of local residents, at least for the Bayport alternative.

More important, however, the location of potentially affected receptors in relation to each

EPA-10: In early stages of project development, sufficient material to complete the Swan Lake marsh restoration was projected to be available during Phase I of the project because the deepening of the channel and dredging of the turning basin were scheduled to take place during Phase I. The channel deepening and turning basin dredging activities were shifted to Phase II of the project in April, 2001 because the City of Texas City, as the Local Sponsor for the Texas City Channel Federal project, requested that the USACE undertake the channel deepening project. The feasibility studies required for the USACE's evaluation of this request are expected to require several years. The applicant determined that the channel deepening and dredging of the turning basin could be postponed to Phase II of the project in order to allow time for the USACE to complete their studies and make a decision on the request to federalize the channel dredging activities. With the shifting of these activities to Phase II, the new work material available in Phase I is not sufficient to meet the needs of the

project and complete the Swan Lake marsh restoration. Phase I material

EPA-10

EPA-11

EPA-12

would be used for project site development, creation of levees for Beneficial Use sites required to replace the loss of dredged material placement capacity at Shoal Point due to the project, and creation of the mitigation area in the north end of Swan Lake. In addition, approximately 200,000 cubic yards of material would be provided to the State and Federal Natural Resource Trustee agencies (Trustees) for use in marsh restoration in Swan Lake. The remainder of the material required to complete the marsh restoration in Swan Lake would be made available during Phase II of the project, which could include dredging additional berths, deepening the channel, and/or dredging the turning basin.

EPA-11: The requested changes have been made in the revised permit application.

EPA-14 EPA-12: The requested changes have been made in the revised DMMP.

EPA-13: The requested changes have been made in Section 3.3.

EPA14: A discussion of ambient noise levels has been added in Section 3.3, and construction and operating noise levels have been added in Section 4 for each alternative.

site are never mentioned or discussed, except as they would be affected by road noise. A short paragraph in Chapter 4 (the same for each alternative site) indicates only that construction noise is difficult to estimate. The same is probably true for operational noise, but there has been no attempt to characterize the noise environments of each site even qualitatively, and no basis laid for a comparative evaluation of the sites with regard to potential noise exposures. A full analysis of the anticipated noise impact for all the alternatives should be included in the FEIS.

Section 3.9, Hazardous Materials Site Assessment, Sections 3.9.1 through 3.9.6, Page 3-53 to Page 3-80.

The hazardous materials site assessments need to include the same radius for all types of potentially hazardous sites that could have an influence at the proposed or alternative sites. In other words, if a radius of one (1) mile is considered for CERCLA sites, a radius of 1 mile should be considered for LUST sites, NPDES sites, TRIS sites, etc. For the NPDES facilities, all discharge points (including storm water discharge points) should be located and identified. At a minimum a 1-mile radius should be considered, as transportation corridors could be affected, as could soils and groundwater.

Page 3-56 and elsewhere in this section.

For solid waste facilities identified within the radius of consideration, the proponent needs to investigated whether or not the landfills are leaching contaminants to groundwater. This may affect the cumulative impacts analysis.

Section 3.10, Surface Water Quality and Hydrology, Section 3.10, Page 3-80.

The monitoring data from Sections 4.1 through 4.7 needs to be provided by site in this section. Further, the monitoring data needs to include parameters such as organics and metals that are likely to impact the surface water from opearations at the porposed and alternative sites.

The spatial trends for metals and organics needs to be provided at locations near the proposed and alternative sites. For this purpose, mapping of areas of contamination should be identified relative to the sites. The impacts of routine or project specific dredging affect more than the TSS. Metals and organic concentrations are increased. The increase in concentration of these parameters and the length of time following dredging the contaminants stay suspended should be quantified.

Section 3.11, Vegetation, Page 3-81 through Page 3-88

The vegetative communities present at and within a 1-mile radius of each of the proposed and alternative sites needs to be provided. Maps would be useful for this purpose. The descriptions for each site from Section 4 should be moved to this section.

EPA-15: The locations of potentially affected receptors in relation to each site and an attempt to characterize typical construction and operational noise as per the EPA "Levels" document has been added in Section 4 for each alternative.

EPA-15

EPA-16

EPA-17

EPA-18

EPA-19

EPA-20

EPA-16: The methodology to assess hazardous material sites in the vicinity of the project was performed in general accordance with guidance established by the American Society for Testing and Materials (ASTM). The Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process (E-1527-00) is widely accepted in the preparation of Phase I Environmental Site Assessments (ESAs). The ASTM standard requires that a record review of Federal, State, and local databases be performed for registered sites within a specified radius of the subject property. The search radius defined by the standard varies depending on the potential for the regulated site to negatively impact the subject property. In other words, the hazardous material site assessments used the search radius specified by the ASTM standard, which is based on the reasonable influence the regulated site may have on the proposed or alternative sites.

EPA-17: Based on a TNRCC records review, sections 3.9.1 and 3.9.4 have been revised to clarify that the landfills described have been closed, indicating absence of continued environmental concern. Section 3.9.6 has also been revised, based on the TNRCC records review, to indicate that no contamination has been detected in ground water at the facility.

EPA-18: Section 3.10 has been modified to include a separate baseline section for each site. Organics and metals requested are included with the data in Appendix D, the site water and elutriate test data.

EPA-19: The comment requests spatial trend information on metals and organics, but there are no data that can be used to provide a meaningful response. The site water and elutriate test data for the existing predredging activities at all sites are presented in Appendix D. These data are non-detects for most metals and organics, and do not provide a basis for evaluating trends. We agree that dredging increases the concentration of more than just TSS. That is the reason that the elutriate tests are performed prior to any dredging. However, the results of the elutriate tests indicate that the concentrations of these other parameters are almost

always below their respective levels of regulatory significance.

EPA-20: The baseline section describes which plant communities occur on each of the alternate sites. The acreage values are "impacts", so will remain in Section 4 (along with site-specific details). Vegetation maps of each alternative (w/in 1-mile radius of footprint) have been added to the baseline section.

Section 3.11.2.7, Page 3-86

This subsection describes the habitat provided by the seagrass plant community. This type of analysis should be extended to the widgeongrass community as well as every other plant community described in Section 3.11. Please discuss in the FEIS.

Section 3.12, Section 404/Section 10 Jurisdictional Areas (Wetlands and Open Water) Pages 3-88 and 3-89

The wetland areas present at and within a 1-mile radius of each of the proposed and alternative sites needs to be provided. Maps would be useful for this purpose. The descriptions for each site from Section 4 should be moved to this section. The types of habitat provided by the wetlands need to be described here of in Section 3.13. Please discuss in the FEIS.

Section 3.13, Terrestrial Wildlife, Page 3-89

The terrestrial wildlife identified or likely to be present at each of the proposed and alternative sites needs to be described. The information about the species observed during the site visits that is presented in Section 4 by site, belongs in this section of the EIS. Please quantify the amount of loafing habitat, foraging habitat, and other habitat types observed or likely to be present. Please provide in the FEIS.

Section 3.14.7 Page 3-100 and Page 3-101

The studies sited dealing with SVOCs, BCB, VOCs, metals and pesticides need to be summarized and concentrations need to be provided. The fact that fish have elevated concentrations of organics and metals in their tissue would imply that the sediment and/or the water column has substantial concentrations of these contaminants, supporting the request for data in Surface Water section. Trends in the concentrations of contaminants in fish and shell fish tissue over time should be provided relative to the locations of the proposed and alternative site. The site will have cumulative impacts from spills on these concentrations and on the fish and shell fish in the area. These need to be recognized and potentially mitigated.

Section 3.17 Commercial and Recreational Navigation

This section provides an overall description of the total commercial shipping through Galveston Bay and mentions, but does not quantify, recreational navigation. There is no mention of commercial fishing traffic. Recreational boating is dismissed because "it ... has traditionally co-existed with commercial navigation." There is a potential for impact on recreational and commercial fishing navigation, however, if the projected increase in commercial shipping increases as is anticipated. Some baseline condition should be established for recreational and commercial fishing navigation. Please discuss fully in the FEIS.

EPA-21: The text has been revised to reflect the habitat value of widgeon grass and other SAV that are not true seagrass species.

EPA-21

EPA-22

EPA-23

EPA-24

EPA-25

EPA-22: Vegetation maps (which include wetland habitats) of each alternative (within a 1-mile radius of the project footprint) have been added in the baseline section. However, site-specific descriptions and acreage remain in the impacts sections since this information is specific to the impacts of the facility at each alternative site. The types of habitat provided by the wetlands for wildlife and aquatic species are described in Section 3.13 (Terrestrial Wildlife) and Section 3.14 (Aquatic Ecology).

EPA-23: Information regarding species observed at each site has been moved to Section 3.13. A large variety of avian species potentially occur within the project area; therefore, most of the project area may constitute loafing, foraging, and/or roosting habitat. Because habitat preferences vary widely by species, quantification of these habitat types by use is not practical.

EPA-24: The DEIS does not state that fish have elevated concentrations of organics and metals in their tissues. The Texas Department of Health (TDH) has periodically performed analysis on fish tissue since 1970 and the raw data results are compiled in two volumes: Fish Tissue Sampling Data, 1970-1997 and Fish Tissue Sampling Data, 1998-1999. Priority pollutants were analyzed (metals, pesticides, and PCBs, semi-volatile and volatile organic compounds); however, the data are incomplete and no reports have been compiled by the TDH using these data. The text has been modified to clarify this. A recently completed study by TDH on seafood consumption safety is now summarized in this section.

EPA-25: Commercial fishing has been addressed and background data on these activities has been added in the baseline and impact sections. With regard to the potential for impact to fishing and recreational vessel traffic, if it is assumed that each deepwater vessel is 1,000 feet long and moving at 6 knots. or 10 feet per second, and the present average is 5 port calls per day in the Texas City Channel, any point on the channel would be occupied by a vessel a total of 100 seconds per vessel or 500 seconds (8.3 minutes) per day. This is about 0.6% of the time, and half of this is at night when recreational use is much smaller. Doubling that to 1.2%, the projected traffic increase is not likely to result in major impacts to small boat traffic.

This is especially true when it is recognized that fishing and recreational vessel (small boat) traffic has many options to avoid delay when an ocean-going ship is passing.

A new Homeland Security policy has been put in place to protect oil terminals along the coast. As part of this plan, the Coast Guard is responsible for restricting recreational boating and fishing within the Texas City Channel, between the Texas City Dike and Shoal Point. With the policy in place, conflict between recreational vessels and container ship traffic would be reduced in the area.

Section 3.18 Land Use/Recreation/Aesthetics, Section 3.18.1 Historical Development Patterns, Page 3-136.

Contrary to its title, this section does not describe historical development patterns. Instead, it discusses recent (1996-2001) housing starts and their average cost by year and by community. This information would be more appropriately included under Socioeconomics, Section 3.19.3 (Housing).

Section 3.18.3 Aesthetics, Page 3-155.

The description of visual aesthetics takes the approach of describing three locations that have a "relatively high level of visual quality" and then identifying the alternative sites that can be seen from them (Shoal Point and Pelican Island only). This approach leaves no mention of Bayport, Spillman's Island, Alexander Island, and Cedar Point. A description of the visual qualities of each of the sites should be added to this section.

Sections 3.19.1 and 4.1.20.1, Population and Social Characteristics

Section 4.1.20.1 states that "it is essential for the EIS to develop a reasonable 'baseline' population projection" but does not discuss whether the projections of the H-GAC or the TWDB are reasonable in that light. No explanation is given for the fact that the population projections (and even the 2000 population figures) from H-GAC and TWDB differ from one another. This section should assess the advantages and limitations of each set of projections, as well as the sensitivity of the results to changes in key assumptions, and discuss why one is used in preference to the other.

Sections 3.19.11 and 4.2.20.2, Environmental Justice

In Section 3.19.11, no justification is provided for using the 5-square-mile analysis area rather than the one-square-mile area. Findings of potential impacts can differ substantially depending on the areal unit of analysis. The applicant should address the question of which area is appropriate to use and assess whether evidence of impacts would differ depending on the choice of area (i.e., perform a sensitivity analysis).

Section 3.19.11 should also discuss any potential limitations of the analysis method. How sensitive are the results to changes in key assumptions (e.g., level established as indicative of economic stress)? The method does not include analysis of the dependence of minority or low-income groups on the affected natural resources or whether these groups are likely to be affected by the proposed project in comparison to the no action alternative (e.g., impacts on subsistence fishing).

EPA-26: This section has been revised and re-named to clarify the use of residential land use information to reflect regional land use patterns.

EPA-27: Section 3.18.4 has been revised to include descriptions of the visual qualities of each alternative site.

EPA-27

EPA-28

EPA-29

EPA-30

EPA-28: The H-GAC population projections are based on Texas State Data Center data, which are used statewide. The TSDC are disaggregated at the local and regional levels by elected officials and planning professionals who are knowledgeable of local growth patterns. H-GAC projections are also used throughout the EIS (e.g., for traffic modeling). Therefore, these are the preferred projections and reference to TWDB projections has been eliminated from the FEIS.

EPA-29: The "5-square-mile" reference was a typographical error. It should have read "50-square-mile". The decision to use the 50-square-mile area was based on an EPA document that is now quoted and cited in Section 3.19.11.

EPA-30: Potential limitations of the method are now discussed in Section 3.19.11. In the Environmental Justice section for each alternative site, additional discussion has been added regarding the potential for the project to affect existing uses of the natural resources.

Section 4.2.20.2. Although Section 3.19.11 stated that a 5-square-mile area is used in the environmental justice analysis, this section reports results for a 50-square-mile area. No explanation or justification is provided for the change. This comment applies to the analytical method for all Build alternatives (i.e., Sections 4.(3-7).20.2).

Section 4.1.20.5 includes a table with economic projections at the statewide level from another, more recent source (Texas Comptroller of Public Accounts 2000). However, this section should (and does not) discuss whether the statewide economic projections corroborate the projections from the 1989 Texas Input-Output Model, from which multipliers are used for the impact analysis.

4.2 Shoal Point Alternative

4.2.2 Roadway Traffic Impact Analysis, page 4-35.

The traffic safety analysis downplays the potential for increased truck-related accidents. It states, "The terminal may increase the potential for truck-related accidents due to the increase in truck traffic (emphasis added)." The FEIS should clearly state that the project will increase the potential for accidents, and a quantified estimate of the potential increase should be included. The baseline discussion of traffic safety in Section 3.2.3 included useful truck accident statistics; and the traffic impact analysis in Section 4.2.2 has good estimates of increased truck traffic due to the project; thus, the traffic safety analysis could (and should) quantify the potential for increased truck-related accidents. The accident risk can be (and should be) mitigated, but some increased risk will likely remain. Please discuss fully in the FEIS.

Section 4.2.3 Noise

This section adequately discusses roadway noise, but the discussion on construction does not address potential effects on receptors (no receptors are identified). There is no discussion of the noise that would be generated during operations. Please clarify in the FEIS.

Section 4.2.4 Physiography, Topography, and Bathymetry

If one defines impact as change, several changes would occur to topography and bathymetry during construction of the container port. While impacts are not likely to be significant in a regional context, substantial site modifications would occur. It would be appropriate to discuss 1) the cutting of Shoal Point to allow wharf area to be offset from the existing channel, 2) the filling of approximately 150 acres of (nonjurisdictional) wetlands, 3) the outline of the area to be dredged to 45 feet, and 4) the amount of dredged material that would arise from deepening the channel and allowing for a turning basin and the probable disposal location for the material. This information is available in an Appendix, but the Appendix is not even referenced in this section. The statement that "these alterations would be expected to have

EPA-31: See response to EPA-29.

EPA-31

EPA-32: The Texas Comptroller of Public Accounts prepares projections only at the statewide level. For the localized data required for this EIS, the Comptroller's office recommended the 1989 Texas Input–Output model.

EPA-32

EPA-33: Section 4.2.2.9, Traffic Safety, has been revised to include truck-related accident data and projections of total accidents and fatal truck-related accidents in the Build and No-Build scenarios.

EPA-34: A description of what types of noises are expected to be heard at each of the alternative sites and how these noises might affect the nearest noise-sensitive receptors has been added. Construction and operational noise has been addressed. Receptors have been identified. Ambient noise levels have been added.

EDΔ_33

EPA-35: This section was revised to more fully describe the proposed site modifications and to include reference to Appendices A and B. The last sentence was revised to clarify local versus regional impacts. The area of nonjurisdictional wetlands on the site stated in the comment (approximately 150 acres) is incorrect. The Shoal Point site contains approximately 51 acres (13 acres jurisdictional and 38 acres nonjurisdictional) of wetland areas.

EPA-34

EPA-35

negligible effects on the local [emphasis added] and regional physiography, topography, and bathymetry" is simply not an accurate or defensible statement. Please clarify in the FEIS.

Section 4.2.7 Surface Soils

This section is repeated for each alternative even though there are different soil types for each site. While impacts on soils will occur at each site, the soils at each site require different levels of treatment before they are suitable for construction. At least some mention of the differences in sites is relevant.

EPA-36

Section 4.2.8, Groundwater Quality and Hydrology, Page 4-53

The reduction in the groundwater recharge needs to be quantified, as does any withdrawal. Impacts need to be discussed in the FEIS...

EPA-37

The relative risk of contamination of shallow groundwater from spills during construction and operation of the Shoal Point site needs to be assessed. The applicant needs to commit to not only developing a Spill Response Plan, but also to implementing it. This can be considered a mitigative measure. Please include in the FEIS.

EPA-38

Section 4.2.9, Hazardous Materials Site Assessment, Page 4-54

The proponent needs to assess the increased probability of traffic accidents between traffic leaving the site and traffic carrying hazardous materials within a given radius, e.g., 1 to 2 miles, of the site. Accidents from increased traffic need to be discussed not only in this section but also in the sections discussing impacts to soils, groundwater, and surface water. Please discuss in the FEIS.

EPA-39

Section 4.2.9.1, Page 4-54

Because of the proximity of this site to marine waters, the proponent should consider mitigative measures that will protect surface water from releases during construction. The use of double shell tanks for storage of fuels, drip pans, or construction of other secondary containment systems are examples. Please discuss in the FEIS.

EPA-40

Section 4.2.9.2, Page 4-54

The FEIS needs to recognize and predict the probability of spills due to operation of the facility, including spills of fuels and other potentially toxic materials maintained on-site, and spills of containerized materials. The impacts of such spills needs to be considered to soils, groundwaters, and surface waters. Please discuss in the FEIS.

EPA-41

EPA-36: The level of soil treatment required for construction of the facility has been added to this section. Similar revisions have been made to the surface soil sections for the other alternative sites.

EPA-37: Only the portion of ground water recharge from precipitation would be affected by the amount of impervious cover at the site. Shallow ground water would continue to be recharged by the surrounding bay waters. The decrease in recharge from precipitation would have little effect on local or regional ground water levels. In addition, the majority of surface soil at the site consists of clay and clayey loam of low permeability. These soils tend to decrease infiltration of precipitation, and a relatively large amount of rainfall is likely lost to evaporation and surface runoff. The primary drinking water aguifers (Chicot and Evangeline aguifers) typically produce fresh water from depth of 300-700 ft and 800-1,500 ft in the vicinity of the proposed and alternative sites. Ground water recharge to these aguifers by precipitation occurs inland in outcrop areas. Ground water quality in these aguifers becomes poorer near the coast where saltwater encroachment limits the amount of available fresh water. The regional effects of this relatively small decrease in recharge on the primary aquifers in the region would be minimal. This section has been revised to more fully describe the effects of reduced recharge from precipitation to the shallow water-bearing unit.

If ground water withdrawals occur on site they would be used only to provide potable water for drinking. Alternatively, other sources of drinking water (e.g., city water system or trucking water to the site) may be used. Similar statements have been made in the groundwater quality and hydrology sections for each alternative site.

EPA-38: This section was revised to more fully assess the relative risk of impacts to the shallow ground water from hazardous material spills, and to indicate that a Spill Response Plan would be implemented. Similar revisions have been made to the groundwater quality and hydrology sections for the other alternative sites.

EPA-39: A section titled "Hazardous Materials Transport" has been added for each alternative (e.g., Section 4.2.9.3 for Shoal Point).

EPA-40: The section entitled Hazardous Material Impacts to the Existing Environment from Project Construction has been revised for each

alternative to include potential mitigation measures to protect surface waters from releases during construction.

EPA-41: The section entitled Hazardous Material Impacts to the Project from Operation Activities has been revised for each alternative to include potential mitigation measures to protect the environment from releases during operations.

Section 4.2.10, Surface Water Quality and Hydrology, Pages 4-54-55

The baseline conditions described in this section need to be moved into Section 3, including Table 4.2.10-1. Table 4.2.10-1 needs to provide data on the concentrations of organics (VOAs, SVOCs, pesticides, PAHs, etc) and metals in the vicinity of the site. Please discuss in the FEIS

EPA-42

Section 4.2.10.1, Dredging Baseline, Page 4-56

The cumulative impacts of dredging for this project and the routine harbor dredging need to be considered. Specifically, the impacts of contaminants associated with the sediment particles on aquatic flora and fauna needs to be assessed.

EPA-43

Section 4.2.10.2, Construction Effects, Page 4-57

The elutriate testing mentioned in the previous section needs to be conducted on sediments that will be dredged during construction and the results need to be quantified and assessed in this section.

EPA-44

The proponent should propose mitigative measures to reduce the impacts of construction on surface water quality and the associated aquatic species. As a potential mitigative measure, the proponent should consider scheduling construction of the facility during non-migrational seasons of the fish. Please discuss in the FEIS.

EPA-45

Section 4.2.10.2, Operational Effects, Page 4-57 and Page 4-58.

The quantification of the reduction of groundwater recharge requested earlier, should be used to help quantify potential impacts on groundwater quality. The applicant needs to discuss the impacts of pollutants (particularly metals and organics) on surface water quality from stormwater runoff and spills. Mitigative measures should also be discussed.

EPA-46

The first paragraph on this page contains a sentence beginning "Water that collects within — the placement areas..." Needs to be clarified for understanding. Some words seem to be missing. Please quantify the increase in relative risk of the release of ballast waters to the marine water, in proportion to the number of vessels that are anticipated to be using the site.

EPA-47

Section 4.2.10.4, Hurricane Levee Pumpout Canal Hydrology, Page 4-58

Please quantify the "slight reduction in cross-section" of the canal in relation to its ability to carry the run-off. In other words, quantify what is described as minimal.

EPA-48

4.2.10.5, Accidental Spills, Pages 4-58 and 4-59

440622/020135 J-37

EPA-42: The baseline Section of 4.2.10 has been moved to Section 3.10.2. A discussion of organics and metals from site water testing data is also included in that section.

EPA-43: Discussions of the cumulative effects of dredging have been added to sections 4.8.7 and 4.8.8. The potential for impacts from contaminants association with sediment particles on flora and fauna is addressed through sediment testing prior to any dredging.

EPA-44: Elutriate tests have been run on virgin soil cores obtained from the area to be dredged. Results of that testing are included in Appendix D. As would be expected for soil that has not been exposed to anthropogenic influences, testing indicated no evidence of man-made contamination.

EPA-45: The comment suggests considering scheduling construction "during non-migrational seasons of the fish". This is not thought to be practical as it is likely that movement of some fish or aquatic organisms in and out of the Bay occurs throughout the year.

EPA-46: Groundwater effects are addressed in Section 4.2.8. Impacts to surface water from liquid spills in containers are discussed in Section 4.2.10. The primary mitigation measure is the Spill Prevention and Control and Countermeasure Plan and the Stormwater Pollution Prevention Plan required for the project.

EPA-47: The referenced sentence has been revised. A discussion of the relative differences in ballast water discharge has been added.

EPA-48: This section has been revised to include details of the effects of the access corridor adjacent to the canal.

Given the number of containers that the terminal is proposed to handle, quantify the potential increase in the number of spills likely to occur and the site. The proposed treatment systems of an oil/water separator will not remove toxic chemicals that are soluble in water. Quantify the increased probability of fuel spills from operation of the site based on operating records of similar terminals, and predict (quantitatively) the effects on surface water quality parameters including organics and metals. Please discuss fully in the FEIS.

Section 4.2.10.6, Habitat Changes, Page 4-59

This section needs to present quantitative information on the impacts of increased turbidity and increased concentrations of organics associated with the dredging. This section also needs a greater level of detail. Impacts on habitat are also discussed elsewhere in the document. It would be prudent to site those other subsections here.

4.2.11 Texas Coastal Management Program (TCMP) Consistency Determination

The section states that the permit has already been triggered, but under all the other alternatives, the permit application has not occurred. This undermines the viability of the other alternatives as they do not have the same analysis as the preferred alternative. Please correct this discrepancy in the FEIS.

Section 4.2.12, Vegetation

A map of the proposed site with over lays of the plant communities present at the site would be extremely helpful, although this should be provided in the baseline section, rather than in the impacts section of the DEIS. The terminology used for the plant communities should be that used in the description of impacts in this section. Once a map is provided, using the same terminology, the impacts to each of the communities can be visualized, described, and quantified.

Section 4.2.13 Section 404/Section 10 Jurisdictional Areas (Wetlands and Open Water)

While there is considerably more information on the impacts to jurisdictional areas in the Appendices, that information should be at least summarized in this section. As it exists, this section provides no insight into the changes that would occur or their magnitude. It mentions (and references the Appendices for) the 45-acre mitigation for development of the site in Swan Lake, but does not even mention the 1,000-acre "Beneficial Use Areas" that would be created south of the site. The rationale for the mitigation and a discussion of the beneficial use areas is needed in this section. (Apparently, there is some discussion of these topics in other locations within the body of the EIS, and those discussions must at least be cross-referenced if "credit" for these analyses is to be claimed here. Please address fully in the FEIS.

Section 4.2.14, Terrestrial Wildlife, Page 4-63 and Page 4-64

440622/020135 J-38

EPA-49: The discussion on spills from containers with hazardous materials has been expanded. The source for fueling spills tending to be smaller is noted in text. It is also inherent in the nature of such spills.

EPA-50: See response to EPA-57. Section 4.2.10.6 (now 4.2.10.7) has been modified to include references to other subsections that discuss impacts on habitats.

EPA-51: This EIS was triggered by a Section 404/Section 10 permit application that was submitted to the USACE, Galveston District, by the applicant for the Shoal Point Container Terminal Project (the proposed project). This permit application also triggered a consistency review. No permit application has been made for the other alternatives, so no consistency review of these alternatives has been triggered. The alternatives analysis in the NEPA process is used to provide comparative information on potential environmental impacts to the permitting agency (in this case, the USACE). The USACE has the authority to issue the permit, deny the permit, or issue the permit with modifications. It does not have the authority to require the applicant to submit a complete permit application for every alternative project site. If the USACE denies the permit for the proposed project and the applicant wanted to construct the project at an alternative site, a complete application for the new proposal would then be required.

It should be noted that the DEIS did not identify a "preferred" alternative. It is assumed that the comment refers to the "proposed alternative". In order to incorporate the concerns expressed during the public comment period, the environmentally preferred alternative will be identified in the Record of Decision.

EPA-53 EPA-52: See response to EPA-20

EPA-49

EPA-50

EPA-51

EPA-52

EPA-53: This section has been revised to clarify the specific activities mentioned (mitigation and Beneficial Use sites) and impacts to jurisdictional wetland communities and open waters.

In Section 3, the species that are likely or have been observed inhabiting this site need to be identified. This section should contain information pertinent to those species that will be affected by the development, construction, and operation of the facility at this location. In addition, this section should provide mitigative measures that will be implemented and will lessen impacts on this site. This section needs to also recognize that noise from equipment and increased human activities will disturb not only the wildlife on the site, but also on adjacent areas.

The information about the species observed during the site visit belongs in Section 3 of this EIS. In this section, provide the impacts to each type of habitat in as quantitative terms as possible. Please describe how the upland areas, shrublands, grasslands, natural and created ("man-made") wetlands will be affected and provide the probability of loss of off-site wildlife due to the noise of construction and the noise of site operation.

The FEIS should also quantify the increased threat to the nekton community from chemical or oil spills and quantify likely indirect impacts on coastal birds and include mitigation for the non-wetland areas that will be affected.

Section 4.2.15, Aquatic Ecology

This section needs to provide a discussion of the impacts on fish, benthos, and water column species in a quantitative manner. This section indicates that "dredged material has not been found to contain toxicants." Based on experience dealing with sediments from other ports, most port sediments contain concentrations of organics and metals that may adversely impact aquatic species, whether or not they exceed the thresholds established by the state. Suspension of sediments from dredging at construction or maintenance dredging as well as from storm water run-off will expose aquatic flora and fauna to concentrations of contaminants that will cause some adverse impacts, either acute or chronic. The potential impacts should be quantified on the more sensitive species. Please discuss in the FEIS.

The benefits to the fish and shell fish species needs to be described and quantified (i.e., the areal extent of beneficial impacts should be provided.) Again the potential for spills of potentially toxic materials during construction and operation of the facility should be quantified; the impacts of those spills on the aquatic flora and fauna should be described in this section. Here or elsewhere the impacts to Essential Fish Habitat (EFH), i.e., impacts that are direct, indirect, and/or cumulative, need to be described.

Section 4.2.16, Endangered and Threatened Species, Page 4-6 and Page 4-66

Some of the material in this section describes background conditions and should be provided on a site-specific basis in Section 3.0 Section 3.0 should also provide a listing of the T&E species at specific to each site. This section should be reserved for descriptions of the

EPA-54 - 56: The description of species observed on the site has been moved to Section 3.13. Construction and operation-related effects to wildlife species and habitat and proposed mitigation measures are addressed in Section 4.2.14 — Environmental Consequences. Acreage values for habitats expected to be lost as a result of the project are provided in Section 4.2.12. The EIS states that the potential for indirect effects to wildlife exists as a result of the increased threat from chemical or oil spills and from noise and other human activities; however, the possibility of those effects is considered to be minimal and is not quantifiable.

EPA-54

EPA-55

EPA-56

EPA-57

EPA-58

EPA-57: The impacts section has been revised. With regard to the three sentences in the comment that begin with "Based on experience..." and end with "...more sensitive species", we believe there are some basic flaws in the implied assumptions. First is the statement that "...most port sediments contain concentrations of organics and metals that may adversely impact aquatic species..." Guidance is provided by the EPA and the USACE to determine the acceptability of sediments for placement in open water sites (e.g., in bays and open ocean sites), and in upland confined placement areas (EPS/USACE, 1991; EPA/USACE, 1998). These documents present a tiered approach to determining impacts, which first requires assessment of existing knowledge. If existing knowledge is sufficient, no further testing is required. If not, chemical analyses are conducted, followed by bioassays and bioaccumulation studies and continuing on to special studies, until a determination can be made.

Relative to Texas estuaries, the USACE Galveston District has conducted a vast number of water, sediment, and elutriate chemical analyses over the years (Robert Hauch, personal communication), dating back into the 1980s. The District has also conducted numerous bioassays on sediments from all the major and minor ship channels in the state and the Gulf Intracoastal Waterway (see for example the EISs for the Houston Ship Channel, Corpus Christi Ship Channel, Texas City Ship Channel, Brownsville Ship Channel, and the various Ocean Dredged Material Disposal Site EISs). The results of this testing do not support the statements contained in this comment.

Second is the statement "Suspension of sediments...acute or chronic." The first part of this statement is covered above by the discussion of the chemical analyses and bioassays. The latter part of this statement must

apply to Upland Confined Placement (UCPAs), since there is no upland unconfined placement around Galveston Bay. The elutriate test is designed to address the concerns of impacts to aquatic organisms by determining the concentration of material dissolved into the water column during dredging or upon release from an UCPA, and comparing the elutriate concentrations to appropriate Texas Water Quality Standards (TWQS) and EPA Water Quality Criteria (WQC), which were developed to protect sensitive aquatic organisms.

Finally relative to the sentence "The potential...sensitive species", the guidance provided in EPA/USACE (1991) and EPA/USACE (1998) is for "appropriate sensitive organisms", and the TWQS and the WQC were developed based on the impacts to sensitive species. Since no adverse impacts are expected, quantification is not necessary.

EPA-58: The impacts section has been revised. The areal extent of Beneficial Use sites proposed for the project is presented in the DMMP (Appendix B). As indicated in the revised Section 4.2.10.5, historic information regarding accidental spills at an existing container terminal on Galveston Bay (Barbours Cut) indicates that this type of facility does not represent a substantial risk for environmental impacts from spills. Therefore, attempts to quantify such risks would not be meaningful.

impacts of the construction and operation of the facility at this site to the T&E species found at this site need to be specifically listed. For example, the FEIS should provide the rationale for the statement .."it is likely that brown pelicans would still frequent the terminal facility" and describe the potential impacts to the white-face ibis.

Suspension of sediments from dredging at construction or maintenance dredging as well as from storm water run-off will expose aquatic fauna to concentrations of contaminants that will cause some adverse impacts, either acute or chronic. The potential impacts should be quantified. Mitigative measures should be provided for to turtles from increased traffic, and chemical spills or releases.

4.2.17 Cultural Resources

Recommend placing the impact evaluation at the beginning of each section, followed by support information, so the decision maker can tell at a glance whether significant resources will be impacted.

Section 4.2.18 Commercial and Recreational Navigation

This section is a comprehensive evaluation of commercial (i.e., commercial transport) impacts and is well done and documented. It assumes, however, that commercial fishing and recreational navigation is insignificant in relation to commercial transport. One cannot assume that simply because recreational navigation doesn't pose a use conflict now because recreational vessels avoid commercial transport vessels that there are now no conflicts and that those conflicts would not increase in future.

Section 4.2.19 Land/Use/Recreation/Aesthetics, page 4-101

The "Labor Force-Related Impacts" discussion on page 4-102 identifies a total of 116.5 acres of land development that would be needed to support the in-migrant labor population. A statement about the availability of this amount of developable land should be included.

4.2.20, Socioeconomics (for all alternatives)

The discussion of social and economic impacts in Section 4.2.20 and under all alternatives should address linkages between environmental and economic impacts. The FEIS should address whether the proposed project have potential economic impacts related to water-based recreation, fishing (either commercial, recreational or subsistence), tourism development (including ecotourism as well as conventional tourism), or other uses of the natural resources and whether increased noise levels have impacts on property values.

EPA-59

EPA-59: Section 3.15 of the DEIS included reference to any T&E species that were observed or of potential occurrence at the alternative sites. The potential for impact to each species relates to the possibility of their occurrence at each site; therefore, this information is discussed in detail in the impact sections. Brown pelicans were observed and are known to use manmade structures for loafing and resting. While construction of the facility may result in the loss of some loafing habitat, it is expected that brown pelicans would be able to use the constructed facility for loafing and resting.

EPA-60

EPA-61

White-faced ibis were observed foraging at Shoal Point. While construction of the facility may result in the loss of some foraging habitat, it is expected that the loss of those habitats would be mitigated by the creation of intertidal habitat at the proposed Beneficial Use sites.

EPA-62

EPA-60: There is a potential for indirect effects to wildlife as a result of the increased threat from chemical or oil spills and from increased storm water run-off; however, the possibility of those effects is not quantifiable. Affected foraging, loafing and resting habitat at Shoal Point would be mitigated. As described in the Dredge Material Management Plan (Appendix B), Beneficial Use Sites (BUS) would allow the creation of approximately 1,353 acres of intertidal habitat, including 363 acres at Swan Lake and 99 acres at Pelican Island.

EPA-63

EPA-61: The EIS has been revised to include a summary of impacts at the beginning of the cultural resources section for each alternative.

EPA-64

EPA-62: The intent was not to suggest that "commercial fishing and recreational navigation is insignificant in relation to commercial navigation". Most estimates of future effects are based on present effects. There is ample information to suggest that little conflict exists between small, shallow draft fishing and recreational vessels and large but infrequent deep draft vessels that are confined to navigation channels. While their paths do cross from time to time, use of the waterways by these two types of craft is very different. That situation would not be fundamentally altered by any of the alternatives considered.

A new Homeland Security policy has been put in place to protect oil terminals along the coast. As part of this plan, the Coast Guard is responsible for restricting recreational boating and fishing within the

Texas City Channel, between the Texas City Dike and Shoal Point. With the policy in place, conflict between recreational vessels and container ship traffic would be reduced in the area.

EPA-63: There is undeveloped land throughout the region that could be utilized for these land uses.

EPA-64: Impacts on water-based recreation, fishing, and ecotourism (primarily birding) are addressed in the recreation impacts section for each alternative (e.g., Section 4.2.19.2 for Shoal Point). The EIS has been revised to include sections on residential property values and their relationship to noise levels (see sections 3.20.10, 4.1.20.8, 4.2.20.8, 4.3.20.8, 4.4.20.8, 4.5.20.8, 4.6.20.8, and 4.7.20.8).

The alternatives impact section should also assess whether the proposed project will have a short-run or long-run impact on community services. Some projections for increased demand for community services are described in Section 4.2.21, but no assessment is made there or in Section 4.2.20 of whether the increased demand can be met in the short and long run, and how short-run service levels may be affected.

The alternatives should also address potential impacts on public finances. Some projections of increased tax revenues are described in Section 4.2.21, but no assessment is made there or in Section 4.2.20 or in any of the alternatives of potential negative impacts or fiscal challenges. Is the local government entity funding the project in good economic health? Would primary costs (project construction and operation) or secondary costs (associated expansion of community services and built infrastructure) be borne by the community or would the project pay for itself (provided that users of the terminal are able to pay)? If the community would bear costs, what are the revenue sources and tax structure of the municipality? Would the increased costs affect the economic health of the community? Please address in the FEIS.

Section 4.2.20.1, Population and Social Characteristics

Section 4.2.20.1 fails to address the impact of project-related population changes on social characteristics of the population. Are there important impacts projected for, for example, age structure, median household income, poverty status, etc., that would have positive or negative effects on the affected community? Please address in the FEIS

Section 4.2.20.3, Community Values

Section 4.2.20.3 addresses only one of the six goals of the Texas City Vision 2020 Plan which, according to Section 3.19.2.9, relate to the proposed project at Shoal Point. What are the impacts of the proposed project in relation to the other five goals, especially the goals of a waterfront supportive of tourism, development and marketing of tourism assets, and changing the perception of environmental quality? Please address in the FEIS.

Section 4.2.20.4, Housing

Section 4.2.20.4 only describes the demand for housing units for immigrants, without assessing the resulting impact. What is the impact of the increased housing demand on the housing market? This section should address both availability of housing (is the demand for additional housing likely to be met in both the short and long run?) and housing prices or rent (would affordable housing be available for inmigrants due to the project, for current residents, and for immigrants already expected to enter the area in the baseline scenario?). Please address in the FEIS.

Section 4.2.20.6, Employment by Sector

440622/020135

EPA-65

EPA-66

EPA-67

EPA-68

EPA-69

EPA-65: The project area is located within a very large, growing and economically viable metropolitan area. Because of the overall growth or demand on services that is typical in a metropolitan area of this size, the addition of approximately 318 families to the area is not expected to result in short or long term impacts on service levels. Any of several communities within the region could receive the growth anticipated as a result of the project, with the majority of the growth most likely going to communities that are able to provide the desired services. The one exception to a metropolitan environment is Cedar Point. A container port in that area could result in considerable demand on services in the immediate area; potentially resulting in longer commute times relative to the other alternative sites.

EPA-66: The USACE does not require a private permit applicant to demonstrate availability of funding or conduct a cost-benefit analysis. The USACE assumes that the applicant has evaluated the economic viability of the project, prior to application submittal. A paragraph has been added to the beginning of Section 4.2.21 (and in the same location for each alternative) to discuss, in general terms, tax revenues that would be generated by the project and by inmigrants.

EPA-67: Given the size and diversity of the greater metropolitan area, the inmigrant population is unlikely to change the social characteristics of the region in which inmigrants may locate.

EPA-68: This section has been revised to address the impacts of the project relative to the other goals of the Texas City Vision 2020 plan.

EPA-69: As discussed for community services in response to EPA-65. because of the size and economic vitality of the greater metropolitan area in which the project is located, it is not anticipated that provision of housing for the projected inmigrants would result in short- or long-term impacts on housing availability or prices in the metropolitan area.

J-43

Section 4.2.20.6 notes that demand for construction workers as a direct result of the proposed project is expected to be met by the available workforce and, therefore, concludes that there will be no immigration of construction workers. This section should address potential inmigration, and associated secondary impacts (e.g. additional demand for housing and community services due to immigration), due to indirect job growth in construction and other sectors.

Section 4.2.21 Community Infrastructure and Municipal Services, page 4-115.

The utilities analysis in this section is incomplete and poorly organized. The text acknowledges that a water supply analysis has not yet been performed. Natural gas is not mentioned, even though it was addressed in the baseline section (3.20.1). Wastewater is discussed in two different sections (4.2.21.1 and 4.2.21.3); and Section 4.2.21.1 states that sewage collection networks could be used to provide water to the site.

Impacts that occur from water-soluble contaminants that may runoff during site construction or site operation and that will not be removed in an oil water separator need to be described and quantified. The increase in volume of storm water runoff due to development of the site needs to be quantified and any impacts to receiving environments (including increased scour, increased freshwater impacts on the marine environment, etc.) need to be described quantitatively and potentially mitigated. Impacts of the increased flow on the receiving wastewater treatment plant need to be addressed. Please address in the FEIS.

Section 4.3 Pelican Island Alternative

Section 4.3.2 Roadway Traffic Impact Analysis, Page 4-122

The roadway traffic analysis for the Pelican Island Alternative generally is thorough and clearly presented. The introduction, however, should cross-reference the discussion of "Transport-Related Impacts" in Section 4.3.19.1 (Land Use). These are the traffic impacts that most concern some of the local residents, and it is important that they know that the EIS does not overlook them.

Section 4.3.3 Noise

Although this section adequately discusses roadway noise, the discussion on construction does not address potential effects on receptors (no receptors are identified). There is no discussion of the noise that would be generated during operations. Please clarify in the FEIS.

Section 4.3.7 Surface Soils

This section is repeated for each alternative even though there are different soil types for each site. While impacts on soils will occur at each site, the soils at each site require different

EPA-70: The Texas Input-Output model projects job growth by sector but does not specify the location of additional jobs within Texas.

EPA-71: This section has been revised.

EPA-70

EPA-71

EPA-72

EPA-73

EPA-74

EPA-75

EPA-72: All of the alternative sites would involve paving land that is currently unpaved, and this would increase the amount of rain runoff. As noted in Section 4.2.10 and similar sections for each alternative, the stormwater runoff would likely be routed through oil/water separators prior to being released to a swale area. The swale area would act as a biofiltration/retention system prior to the waters being released to Galveston Bay. This process would not involve increased scour to receiving streams. The differences in local salinity from this increased runoff would be very small and short term. As noted in Section 4.2.9.2, some containers would carry materials that have been classified as hazardous in some way. A portion of these materials would be liquid, and if these were to leak, materials would be released to the pavement. A facility at each site would have an emergency response plan in place and equipment designed to contain and clean up releases of this type. While release to surface water is possible, it is unlikely to occur often and any attempt to quantify would involve significant speculation. The population that would be required to construct and operate the facility at any of the alternate sites would reside at a wide range of locations in the region that are served by various wastewater systems. Wastewater systems routinely respond to small variations in service area population, without significant effect.

EPA-73: The introduction to Section 4.3.2 has been revised to reference Section 4.3.19.1, Transport-Related Impacts.

EPA-74: See response to EPA-34.

EPA-75: See response to EPA-36.

levels of treatment before they are suitable for construction. At least some mention of the differences in sites is relevant.

Section 4.3.9, Hazardous Materials Site Assessment, Page 4-113

The FEIS needs to assess the increased probability of traffic accidents (in proportion to increased traffic) between traffic leaving the site and traffic carrying hazardous materials within a given radius, e.g., 1 to 2 miles, of the site. Accidents from increased traffic need to be discussed not only in this section but also in the sections discussing impacts to soils, groundwater, and surface water.

Section 4.3.9.1, Page 4-131

Because of the proximity of this site to marine waters, the proponent should consider mitigative measures that will protect surface water from releases during construction. The use of double shell tanks for storage of fuels, drip pans, or construction of other secondary containment systems are examples.

Section 4.3.9.2, Page 4-132

The FEIS needs to recognize and predict the probability of spills due to operation of the facility, including spills of fuels and other potentially toxic materials maintained on-ste, and spills of containerized materials. The impacts of such spills needs to be considered to soils, groundwaters, and surface waters.

Section 4.3.10, Surface Water Quality and Hydrology, Pages 4-132-133

The baseline conditions described in this section need to be moved into Section 3, including Table 4.3.10-1. Table 4.3.10-1 needs to provide data on the concentrations of organics (VOAs, SVOCs, pesticides, PAHs, etc.) and metals in the vicinity of the site. Because the surface water data indicate that water quality in the vicinity of Pelican Island is high, contaminants from storm water during both construction and operation, and re-suspension of contaminants in the sediments during dredging needs to be quantitatively assessed. Mitigative measures should also be proposed. Data on the elutriate from the sediments needs to be provided and discussed relative to impacts on water quality. In addition, the impacts of contaminants associated with the sediment particles on aquatic flora and fauna needs to be assessed.

The statement "New work sediments that might be dredged during construction would be less likely to exhibit contamination (relative to maintenance material).." needs to be supported by sediment sampling results. This section should also quantify the impact of creating impermeable surfaces on storm water flow (e.g. scour at the discharge point). Please quantify the increase in

EPA-76: See response to EPA-39.

EPA-77: See response to EPA-40.

EPA-78: See response to EPA-41.

EPA-79: Requested changes have been made.

EPA-80: Requested changes have been made.

EPA-77

EPA-76

EPA-78

EPA-79

EPA-80

relative risk of the release of ballast waters to the marine water, in proportion to the number of vessels that are anticipated to be using the site.

Section 4.3.13, Section 404/Section 10 Jurisdictional Areas (Wetlands and Open Water)

No attempt has been made to describe what changes would occur with development of the Pelican Island site. This section specifies only how many acres of what type occur at the site The assumption one must make is that all of these acres would be lost. Unlike the proponent's preferred alternative, there is no additional supporting material that even suggests that this alternative was ever seriously evaluated for impacts. There is an inconsistency between the number of acres (183) described in this section and the number in Section 4.3.12. (52 acres). Please ensure consistency or clarify for the reader.

EPA-81

EPA-82

EPA-83

EPA-84

EPA-85

The FEIS needs to provide mitigative measures that will either reduce the loss of wetlands on the site, or will create wetlands elsewhere to reduce the impacts of removing all the wetland from the site.

Section 4.3.14, Terrestrial Wildlife, Page 4-135 to Page 4-137

Much of the information in this section belongs in Section 3. In Section 3, the species that are likely or have been observed inhabiting this site (Pelican Island) need to be identified. Section 4.3.14 should contain information pertinent to those species that will be affected by the development, construction, and operation of the facility at this location, in as quantitative terms as possible. In addition, this section should provide mitigative measures that will be implemented and will lessen impacts on this site. Include mitigation for the non-wetland areas that will be affected. Particularly, mitigation measures need to reduce impacts to the rookeries.

This section needs to recognize that noise from equipment and increased human activities will disturb not only the wildlife on the site, but also on adjacent areas. Please provide the probability of loss of off-site wildlife due to the noise of construction and the noise of site operation and quantify the increased threat to the coastal bird community from chemical or oil spills.

Section 4.3.15, Aquatic Ecology, Page 4-137

This section needs to provide a discussion of the impacts on fish, benthos, and water column species in a quantitative manner. There is an inconsistency between the discussion page 132 and this page on the issue of toxics associated with dredging. This section indicates the potential presence of toxics in the sediments. The inconsistency needs to be rectified. Based on experience dealing with sediments from other ports, most port sediments contain concentrations of organics and metals that may adversely impact aquatic species, whether or not they exceed the thresholds established by the state. Suspension of sediments from dredging at construction or

EPA-81: This section has been modified to clarify that the wetlands within the project footprint would be lost as a result of project construction at this site. Sufficient information was provided to assess and compare impacts for each alternative. If the USACE denies the permit for the proposed project and the applicant wanted to construct the project at an alternative site, a complete application for the new proposal would then be required, just as the applicant prepared the permit application for the Shoal Point site, which triggered this EIS. Section 4.3.13 has been changed to clarify the impacted acreage.

EPA-82: Mitigation plans were developed only for the proposed project. If a permit application were submitted for this alternative, a detailed mitigation plan would be required.

EPA-83 and **84**: The description of species observed on the site has been moved to Section 3.13. Construction and operation related effects to wildlife species and habitat are addressed in Section 4.3.14, Environmental Consequences. The EIS states that the a potential for indirect effects to wildlife exists as a result of the increased threat from chemical or oil spills and from noise and other human activities; however, the possibility of those effects is considered to be minimal and is not quantifiable.

The Pelican Island site is not the proposed alternative; therefore, no wildlife habitat mitigation has been proposed. If a permit application were submitted for this alternative, a detailed mitigation plan would be required.

EPA-85: This section has been revised. Inconsistencies with the surface Water Quality and Hydrology section have been corrected. Also see response to EPA-57.

maintenance dredging as well as from stormwater run-off will expose aquatic flora and fauna to concentrations of contaminants that will cause some adverse impacts, either acute or chronic. The potential impacts should be quantified on the more sensitive species.

Again the potential for spills of potentially toxic materials during construction and operation of the facility should be quantified based on construction and operations of other facilities that are similar. The statement "There are far too many unknown variables to accurately predict the extent of damage or long-term impacts a spill would cause on the aquatic community and the resultant effects on the commercial fishing industry." needs to be removed. The purpose of an EIS is to identify and quantify the potential impacts of construction and operation of a facility. The impacts of those spills on the aquatic flora and fauna should be described in this section.

Section 4.3.16, Endangered and Threatened Species (T&E), Section 4.3.16.2, page 4-138

The observations made during the site visit need to be moved to section 3.15 on with site specific descriptions. Section 3.15 should also provide a listing of the T&E species at specific to each site. This section should be reserved for descriptions of the impacts of the construction and operation of the facility at this site to the T&E species found at this site need to be specifically listed.

Suspension of sediments from dredging at construction or maintenance dredging as well as from storm water run-off will expose aquatic species to concentrations of contaminants that will cause some adverse impacts, either acute or chronic. The potential impacts should be quantified. Mitigative measures should be provided for to the sea turtles from increased traffic, and chemical spills or releases along with the pelican loafing area and the white-face ibis rookery.

4.3.17 Cultural Resources

EPA recommends placing the impact evaluation at the beginning of each section, followed by support information, so the decision maker can tell at a glance whether significant resources will be impacted.

Section 4.3.18 Commercial and Recreational Navigation

This three-sentence analysis of impacts of the Pelican Island site is very limited. It is difficult to comprehend how there could be no impact, although impacts might be small. There is no discussion of commercial fishing or recreational navigation.

Section 4.3.19 Land/Use/Recreation/Aesthetics, Page 4-140.

440622/020135 J-47

EPA-86: The impacts section has been revised. Also see response to EPA-58 regarding spills.

EPA-87: Section 3.15 of the DEIS included reference to any T&E species that were observed or of potential occurrence at the alternative sites. The potential for impact to each species relates to the possibility of their occurrence at each site; therefore, this information is discussed in detail in the impact sections.

EPA- 88: There is a potential for indirect effects to wildlife as a result of the increased threat from chemical or oil spills and from increased storm water run-off; however, the possibility of those effects is not quantifiable.

The Pelican Island site is not the proposed alternative; therefore, no wildlife habitat mitigation has been proposed. If a permit application were submitted for this alternative, a mitigation plan would be required.

EPA-89: The EIS has been revised to include a summary of impacts at the beginning of the cultural resources section for each alternative.

EPA-90: Section 4.3.18 has been revised.

EPA-86

EPA-87

EPA-88

EPA-89

EPA-90

The "Labor Force-Related Impacts" discussion on page 4-141 identifies a total of 116.5 acres of land development that would be needed to support the in-migrant labor population. A statement about the availability of this amount of developable land should be included.

EPA-91

Section 4.3.20.1, Population and Social Characteristics

This section fails to address the impact of project-related population changes on social characteristics of the population. Are there important impacts projected for, for example, age structure, median household income, poverty status, etc., that would have positive or negative effects on the affected community? This comment applies to all Build alternatives.

EPA-92

Section 4.3.20.1 fails to address the impact of project-related population changes on social characteristics of the population. Are there important impacts projected for, for example, age structure, median household income, poverty status, etc., that would have positive or negative effects on the affected community? This comment applies to all Build alternatives (i.e., Sections 4.(3-7).20.1).

EPA-93

Section 4.3.20.3, Community Values

Is the Galveston Comprehensive Plan the same as the City of Texas City's plan? The proposed action analyzed the City of Texas City's plans, but not the Galveston Comprehensive plan? The analysis needs to be consistent. Also the preferred alternative discussed how the alternative would achieve the goal of the Texas plan, will this alternative achieve the same thing? Please clarify.

EPA-94

Section 4.3.20.4, Housing

This Section only describes the demand for housing units for immigrants, without assessing the resulting impact. What is the impact of the increased housing demand on the housing market? This section should address both availability of housing (is the demand for additional housing likely to be met in both the short and long run?) and housing prices or rent (would affordable housing be available for inmigrants due to the project, for current residents, and for immigrants already expected to enter the area in the baseline scenario?).

EPA-95

Section 4.3.20.6, Employment by Sector

Section 4.3.20.6 notes that demand for construction workers as a direct result of the action is expected to be met by the available workforce and, therefore, concludes that there will be no immigration of construction workers. This section should address potential immigration, and associated secondary impacts (e.g. additional demand for housing and community services due to immigration), due to indirect job growth in construction and other sectors.

EPA-96

Section 4.3.21 Community Infrastructure and Municipal Services, Page 4-152

440622/020135 J-48

EPA-91: See response to EPA-63.

EPA-92 and -93: See response to EPA-67.

EPA-94: These two plans are not the same since the Galveston Comprehensive Plan was prepared by, and applies to, the City of Galveston, while the City of Texas City Vision 2020 plan was prepared by, and applies to, the City of Texas City. For each alternative site, the most applicable local plan relating to the community's values and goals was reviewed to determine the consistency of the proposed project with the plans of the community in which it would be located. Since the Shoal Point alternative is the only site located in the City of Texas City, none of the other alternative sites would satisfy the goals of the City of Texas City's plan. However, it was determined that the most appropriate approach to addressing community values for each alternative site was to evaluate the local community's plans rather than evaluating that community's ability to meet the goals of another community's (i.e., the City of Texas City's) plan.

EPA-95: See response to EPA-69.

EPA-96: See response to EPA-70.

As in all alternatives, the utilities analysis in this section is incomplete and poorly organized. The text acknowledges that a water supply analysis has not yet been performed. Natural gas is not mentioned, even though it was addressed in the baseline section (3.20.1). Wastewater is discussed in two different sections (4.3.21.1 and 4.3.21.3); and Section 4.3.21.1 states that sewage collection networks could be used to provide water to the site. Impacts that occur from water-soluble contaminants that may runoff during site construction or site operation and that will not be removed in an oil water separator need to be described and quantified.

The increase in volume of storm water runoff due to development of the site needs to be quantified and any impacts to receiving environments (including increased scour, increased freshwater impacts on the marine environment, etc.) need to be described quantitatively and potentially mitigated. Impacts of the increased flow on the potential receiving wastewater treatment plant need to be addressed.

Section 4.4 Bayport Alternative

Section 4.4.2 Roadway Traffic Impact Analysis, Page 4-160

The roadway traffic analysis for the Bayport Alternative generally is thorough and clearly presented. The introduction, however, should cross-reference the discussion of "Transport-Related Impacts" in Section 4.4.19.1 (Land Use). These are the traffic impacts that most concern some of the local residents, and it is important that they know that the EIS does not overlook them.

Section 4.4.3 Noise

This section adequately discusses roadway noise, but the discussion on construction does not address potential effects on receptors (no receptors are identified). There is no discussion of the noise that would be generated during operations.

Section 4.4.9, Hazardous Materials Site Assessment, Page 4-169

The FEIS should assess the increased probability of traffic accidents between traffic leaving the site and traffic carrying hazardous materials within a given radius, e.g., 1 to 2 miles, of the site. Accidents from increased traffic need to be discussed not only in this section but also in the sections discussing impacts to soils, groundwater, and surface water.

Section 4.4.9.1, Page 4-169

Because of the proximity of this site to marine waters, the proponent should consider mitigative measures that will protect surface water from releases during construction. The use of

440622/020135 J-49

EPA-97: This section has been revised.

EPA-97 EPA-98: See response to EPA-72

EPA-99: The introduction to Section 4.4.2 has been revised to reference

Section 4.4.19.1, Transport-Related Impacts.

EPA-100: See response to EPA-34.

EPA-99

EPA-100

EPA-101

EPA-102

EPA-101: See response to EPA-39.

EPA-102: See response to EPA-40.

double shell tanks for storage of fuels, drip pans, or construction of other secondary containment systems are examples.

Section 4.4.9.2, Page 4-169

The proponent needs to recognize and predict the probability of spills due to operation of the facility, including spills of fuels and other potentially toxic materials maintained on-site, and spills of containerized materials. The impacts of such spills needs to be considered to soils, groundwaters, and surface waters.

Section 4.4.10, Surface Water Quality and Hydrology, Pages 4-169-172

The baseline conditions described in this section need to be moved into Section 3, including Table 4.4.10-1. Table 4.4.10-1 needs to provide data on the concentrations of organics (VOAs, SVOCs, pesticides, PAHs, etc.) and metals in the vicinity of the site.

Because the surface water data indicate that water quality in the vicinity is relatively high contaminants from stormwater during both construction and operation, and re-suspension of contaminants in the sediments during dredging needs to be quantitatively assessed. Mitigative measures should also be proposed.

Data on the elutriate from the sediments suggests that potential impacts from copper have some likelihood of occurring. The proponent should assess potential impacts of dredging on surface water quality and the associated aquatic flora and fauna and consider mitigative measures. As a potential mitigative measure, the proponent should consider scheduling construction of the facility during non-migrational seasons of the fish. This section should also quantify the impact of creating impermeable surfaces on stormwater flow (e.g. scour at the discharge point). Please quantify the increase in relative risk of the release of ballast waters to the marine water, in proportion to the number of vessels that are anticipated to be using the site.

Section 4.4.12, Vegetation, Page 4-172

Much of the information presented in this section should be moved to Section 3. A map of the proposed site with over lays of the plant communities present at the site would be extremely helpful, although this should be provided in the baseline section, rather than in the impacts section of the EIS. The terminology used for the plant communities should be that used in the description of impacts in this section. Once a map is provided, using the same terminology, the impacts to each of the communities can be visualized, described, and quantified. The FEIS should propose mitigative measures that will mediate the loss of the two woodland communities with tidal inlets.

Section 4.4.13 Section 404/Section 10 Jurisdictional Areas (Wetlands and Open Water)

440622/020135 J-50

EPA-103: See response to EPA-41.

EPA-104: The requested changes have been made.

EPA-105: Ambient water quality data at the Bayport site does not appear to be significantly different from that of other sites. Storm water runoff should be managed appropriately through a Stormwater Pollution Prevention Plan and Best Management Practices (BMPs) during construction and operation. The storm-water runoff would likely be routed through oil/water separators prior to being released to a swale area. The swale area would act as a biofiltration/retention system prior to the waters being released to Galveston Bay. Sediment suspension during dredging is routinely assessed prior to dredging.

EPA-106: We agree that one older copper value was found to be above the ambient criteria, but this appears to have been an isolated incident. The impact of dredging on flora and fauna is noted. Scheduling dredging "during non-migrational seasons of the fish" is not considered practical. Impacts of impervious cover are assessed. As ballast water release in port is now a rare event, there does not appear to be a quantitative way to predict changes in such activity.

EPA-107: See response to EPA-20. If a permit application was submitted for this alternative, a detailed mitigation plan would be required.

EPA-107

EPA-103

EPA-104

EPA-105

EPA-106

No attempt has been made to describe what changes would occur with development of the Bayport site, only that the project footprint would "impact" approximately 3 acres. The assumption one must make is that all of these acres would be lost. Unlike the proponent's preferred alternative, there is no additional supporting material that even suggests that this alternative was ever seriously evaluated for impacts.

Section 4.4.14, Terrestrial Wildlife, Page 4-173

In Section 3, the species that are likely or have been observed inhabiting the Bayport site need to be identified. This section should contain information pertinent only to those species that will be affected by the development, construction, and operation of the facility at this location. In addition, this section should provide mitigative measures that will be implemented and will lessen impacts on this site. This section also needs to recognize that noise from equipment and increased human activities will disturb not only the wildlife on the site, but also on adjacent areas.

Please describe in the FEIS mitigative measures for the loss of the upland woodlands, shrub-grass uplands, and freshwater wetlands. Consider especially mitigative measures for the leopard frogs. Provide the probability of loss of off-site wildlife due to the noise of construction and the noise of site operation.

Section 4.4.15, Aquatic Ecology, Page 4-174

This section of the DEIS needs to provide a discussion of the impacts on fish, benthos, and water column species in a quantitative manner. The impacts of construction and maintenance dredging on the aquatic need to be considered. Based on the potential for elevated copper concentrations in the sediments and experience dealing with sediments from other ports, most port sediments contain concentrations of organics and metals that may adversely impact aquatic species, whether or not they exceed the thresholds established by the state. Suspension of sediments from dredging at construction or maintenance dredging as well as from storm water run-off will expose aquatic flora and fauna to concentrations of contaminants that will cause some adverse impacts, either acute or chronic. The potential impacts should be quantified on the more sensitive species.

Again the potential for spills of potentially toxic materials during construction and operation of the facility should be quantified based on construction and operations of other facilities that are similar. The statement "There are far too many unknown variables to accurately predict the extent of damage or long-term impacts a spill would cause on the aquatic community and the resultant effects on the commercial fishing industry." needs to be removed. The purpose of and EIS is to identify and quantify the potential impacts of construction and operation of a facility. The impacts of those spills on the aquatic flora and fauna should be described in this section.

EPA-108

EPA-108: This section has been modified to update the jurisdictional wetland acreage and to clarify that the wetlands within the project footprint would be lost as a result of project construction at this site. Sufficient information was provided to assess and compare impacts for each alternative. If an alternative site were selected for project construction, a detailed permit application would have to be prepared and submitted to the USACE, just as the applicant prepared the permit application for the Shoal Point site, which triggered this EIS.

EPA-109

EPA-109 - 112: The description of species observed on the site has been moved to Section 3.13. Construction and operation related effects to wildlife species and habitat are addressed in Section 4.4.14, Environmental Consequences. The EIS states that the potential for indirect effects to wildlife exists as a result of the increased threat from chemical or oil spills and from noise and other human activities; however, the possibility of those effects is considered to be minimal and is not quantifiable.

EPA-110

EPA-111

EPA-112

Because the Bayport site is not the proposed alternative, no wildlife habitat mitigation was proposed. If a permit application were submitted for this alternative, a mitigation plan would be required.

EPA-113

EPA-113: See response to EPA-57. In addition, the following information addresses the concerns that are raised in this comment with regard to the potential for elevated copper concentrations. Table C-24, in GBNEP-22 Volume V, provides time trend analysis information on the Texas Water Commission's Bayport Ship Channel segment. These data, which include 14 years of data and about one sampling event per year (0.92 per year), showed copper increasing half a unit per year. However, the 95% confidence interval showed that there could be either a minor decline or a more significant increase in copper concentrations. Based on these data, no firm conclusion of an increasing trend in copper concentration can be reached and a discussion of one in the Shoal Point EIS would be inappropriate. In addition, while elutriate data presented in Appendix D shows three stations with copper concentrations above the detection limits, these numbers are well below the TWQS of 13.5 mg/kg. Therefore, these

EPA-114

EPA 114: The impacts section has been revised. Also see response to EPA-58 regarding spills.

values are not elevated and no adverse effects should be expected.

Please quantify the increased threat to the nekton community from chemical or oil spills and quantify likely indirect impacts on coastal birds. Impacts to oyster beds could be more than **EPA-115** minimal based on the care taken during dredging and redeposition of sediment. Mitigative measures need to protect these shellfish. Section 4.4.16, Endangered and Threatened Species, Section 4.4.16.2, page 4-175 Mitigative measures should be provided for to the sea turtles from increased traffic, and **EPA-116** chemical spills or releases. Section 4.4.17 Cultural Resources This section does not identify whether impacts are likely under each alternative, they only **EPA-117** identify presence or absence of cultural resources. Place an impact evaluation sentence at the beginning of each section, followed by support information, so the decision maker can tell at a glance whether significant resources will be impacted. Section 4.4.18 Commercial and Recreational Navigation Analysis of potential impacts of development of this site is appropriate for commercial **EPA-118** transport. There is no discussion of potential impacts on commercial fishing or recreational navigation. Section 4.4.19 Land/Use/Recreation/Aesthetics, page 4-193 **EPA-119**

The "Labor Force-Related Impacts" discussion on page 4-194 identifies a total of 128.3 acres of land development that would be needed to support the in-migrant labor population. A statement about the availability of this amount of developable land should be included.

Section 4.4.20 Socioeconomics, Section 4.4.20.1, Population and Social Characteristics

This section fails to address the impact of project-related population changes on social characteristics of the population. Are there important impacts projected for, for example, age structure, median household income, poverty status, etc., that would have positive or negative effects on the affected community? This comment applies to all Build alternatives.

Section 4.4.20.1 also does not address the impact of project-related population changes on social characteristics of the population. Are there important impacts projected for, for example, age structure, median household income, poverty status, etc., that would have positive or negative effects on the affected community?

Section 4.4.20.3, Community Values

440622/020135 J-52

EPA-115: See response to EPA-58 regarding spills. If a permit application were submitted for this alternative, a detailed mitigation plan would be required for unavoidable impacts.

EPA-116: The Bayport site is not the proposed alternative; therefore, no wildlife habitat mitigation has been proposed. If a permit application were submitted for this alternative, a detailed mitigation plan would be required.

EPA-117: The EIS has been revised to include a summary of impacts at the beginning of the cultural resources section for each alternative.

EPA-118: This section has been revised to include a discussion of commercial fishing and recreational navigation at Bayport.

EPA-119: See response to EPA-63.

EPA-120

EPA-121

EPA-120 and 121: See response to EPA-67.

Is the Galveston Comprehensive Plan the same as the City of Texas City's plan? The proposed action analyzed the City of Texas City's plans, but not the Galveston Comprehensive plan? The analysis needs to be consistent. Also the preferred alternative discussed how the alternative would achieve the goal of the Texas plan, will this alternative achieve the same thing?

Section 4.4.20.4, Housing

This section only describes the demand for housing units for inmigrants, without assessing the resulting impact. What is the impact of the increased housing demand on the housing market? This section should address both availability of housing (is the demand for additional housing likely to be met in both the short and long run?) and housing prices or rent (would affordable housing be available for inmigrants due to the project, for current residents, and for inmigrants already expected to enter the area in the baseline scenario?).

Section 4.4.20.6, Employment by Sector

Section 4.4.20.6 notes that demand for construction workers as a direct result of the action is expected to be met by the available workforce and, therefore, concludes that there will be no inmigration of construction workers. This section should address potential inmigration, and associated secondary impacts (e.g. additional demand for housing and community services due to inmigration), due to indirect job growth in construction and other sectors.

Section 4.4.21 Community Infrastructure and Municipal Services, Page 4-203 and Page 4-206

The utilities analysis in this section is incomplete and poorly organized. The text acknowledges that a water supply analysis has not yet been performed. Natural gas is not mentioned, even though it was addressed in the baseline section (3.20.1). Wastewater is discussed in two different sections (4.4.21.1 and 4.4.21.3); and Section 4.4.21.1 erroneously states that sewage collection networks could be used to provide water to the site.

Impacts that occur from water-soluble contaminants that may runoff during site construction or site operation and that will not be removed in an oil water separator need to be described and quantified.

The increase in volume of storm water runoff due to development of the site needs to be quantified and any impacts to receiving environments (including increased scour, increased freshwater impacts on the marine environment, etc.) need to be described quantitatively and potentially mitigated. Impacts of the increased flow on the existing receiving wastewater treatment plant need to be addressed.

Section 4.5.3 Noise

440622/020135 J-53

EPA-122: See response to EPA-94. For the Bayport alternative, this section included information from the cities of La Porte, Pasadena, Seabrook, and Shoreacres.

EPA-123: See response to EPA-69.

EPA-124: See response to EPA-34.

EPA-123 EPA-125: This section has been revised.

EPA-126 and 127: See response to EPA-72.

EPA-124

EPA-125

EPA-126

EPA-127

This section adequately discusses roadway noise, but the discussion on construction does not address potential effects on receptors (no receptors are identified). There is no discussion of the noise that would be generated during operations.

Section 4.5.12, Vegetation, Page 4-224

A map of the proposed site with over lays of the plant communities present at the site would be extremely helpful, although this should be provided in the baseline section, rather than in the impacts section of the EIS.

Section 4.5.13 Section 404/Section 10 Jurisdictional Areas (Wetlands and Open Water)

According to this three-sentence section, 3 acres of high salt marsh would be "impacted." One presumes this means destroyed. It would be nice to know how the 183 acres of open water would be "impacted." Presumably, some would be filled, and some would be dredged. But indicating only that 183 acres would be impacted is not a sufficient description of potential impacts. Unlike the preferred alternative, there is no additional supporting material that even suggests that this alternative was ever seriously evaluated for impacts.

Section 4.5.14, Terrestrial Wildlife, Page 4-225

In Section 3, the species that are likely or have been observed specifically inhabiting the Spillman's Island site need to be identified. This section should contain information pertinent to those species that will be affected (rather than generic information) by the development, construction, and operation of the facility at this location. In addition, this section should provide __mitigative measures that will be implemented and will lessen impacts on this site.

This section needs to recognize that noise from equipment and increased human activities will disturb not only the wildlife on the site, but also on adjacent areas. Quantify the increased indirect threat from chemical or oil spills and traffic on coastal birds and provide mitigative measures.

Section 4.5.15, Aquatic Ecology, Page 4-225 and Page 4-226

This section needs to provide a discussion of the impacts on fish, benthos, water column and nekton species in a quantitative manner. The increased concentrations of organics and metals from sediment dredging may adversely impact aquatic species, whether or not they exceed the thresholds established by the state. Suspension of sediments from dredging at construction or maintenance dredging as well as from storm water run-off will expose aquatic flora and fauna to concentrations of contaminants that will cause some adverse impacts, either acute or chronic. The potential impacts should be quantified.

EPA-128: See response to EPA-34.

EPA-129 and 130: See response to EPA-20. Vegetation maps with overlay of the footprint of facility and channels have been added to Section 3. This should clarify impacts.

EPA-129

EPA-131 and 132: The description of species observed on the site has been moved to Section 3.13. Construction and operation related effects to wildlife species and habitat are addressed in Section 4.5.14, Environmental Consequences. The EIS states that the potential for indirect effects to wildlife exists as a result of the increased threat from chemical or oil spills and from noise and other human activities; however, the possibility of those effects is considered to be minimal and is not quantifiable.

EPA-130

The Spillman's Island site is not the proposed alternative; therefore, no wildlife habitat mitigation has been proposed. If a permit application were submitted for this alternative, a detailed mitigation plan would be required.

EPA-133: See response to EPA-57.

EPA-131

EPA-132

EPA-133

Again the potential for spills of potentially toxic materials during construction and operation of the facility should be quantified; the impacts of those spills on the aquatic flora and fauna should be described in this section. Here or elsewhere the impacts to Essential Fish Habitat (EFH), i.e., impacts that are direct, indirect, and/or cumulative, need to be described. Negative impacts are only alluded to in this section. Mitigative measures need to be developed to reduce the impacts of dredging and re-deposition on the live oyster reefs near Spillman's Island.

Section 4.5.17 Cultural Resources

This section does not identify whether impacts are likely under each alternative, they only identify presence or absence of cultural resources. Place an impact evaluation sentence at the beginning of each section, followed by support information, so the decision maker can tell at a glance whether significant resources will be impacted.

Section 4.5.18 Commercial and Recreational Navigation

This three-sentence section indicates that little impact would occur, a more reasonable statement than none would occur (as for the Pelican Island site). No projections of ship movements, however, supports this statement. There is no discussion of potential impacts on commercial fishing or recreational navigation.

Section 4.5.19 Land/Use/Recreation/Aesthetics, Page 4-228

The "Labor Force-Related Impacts" discussion on page 4-228 identifies a total of 127.9 acres of land development that would be needed to support the in-migrant labor population. A statement about the availability of this amount of developable land should be included.

Section 4.5.20 Socioeconomics, Section 4.5.20.1, Population and Social Characteristics

This section fails to address the impact of project-related population changes on social characteristics of the population. Are there important impacts projected for, for example, age structure, median household income, poverty status, etc., that would have positive or negative effects on the affected community? This comment applies to all Build alternatives.

This section fails to address the impact of project-related population changes on social characteristics of the population. Are there important impacts projected for, for example, age structure, median household income, poverty status, etc., that would have positive or negative effects on the affected community?

Section 4.5.20.3, Community Values

440622/020135 J-55

EPA-134: The impacts section has been revised. Also see response to EPA-58 regarding spills.

Although live oyster reefs occur near this alternative, none are expected to be covered by re-deposition of dredged material.

EPA-135: The EIS has been revised to include a summary of impacts at the beginning of the cultural resources section for each alternative.

EPA-135 EPA-136: This section has been revised to include a discussion of commercial fishing and recreational navigation at Spillman's Island.

EPA-137: See response to EPA-63.

EPA-134

EPA-136

EPA-137

EPA-138

EPA-139

EPA-138 and 139: See response to EPA-67.

Is the Galveston Comprehensive Plan the same as the City of Texas City's plan? The proposed action analyzed the City of Texas City's plans, but not the Galveston Comprehensive plan? The analysis needs to be consistent. Also the preferred alternative discussed how the alternative would achieve the goal of the Texas plan, will this alternative achieve the same thing?

Section 4.5.20.4, Housing

This section only describes the demand for housing units for inmigrants, without assessing the resulting impact. What is the impact of the increased housing demand on the housing market? This section should address both availability of housing (is the demand for additional housing likely to be met in both the short and long run?) and housing prices or rent (would affordable housing be available for inmigrants due to the project, for current residents, and for inmigrants already expected to enter the area in the baseline scenario?).

Section 4.5.20.6, Employment by Sector

Section 4.5.20.6 notes that demand for construction workers as a direct result of the action is expected to be met by the available workforce and, therefore, concludes that there will be no inmigration of construction workers. This section should address potential inmigration, and associated secondary impacts (e.g. additional demand for housing and community services due to inmigration), due to indirect job growth in construction and other sectors.

Section 4.5.21 Community Infrastructure and Municipal Services, page 4-239

The utilities analysis in this section is incomplete and poorly organized. The text acknowledges that a water supply analysis has not yet been performed. Natural gas is not mentioned, even though it was addressed in the baseline section (3.20.1). Wastewater is discussed in two different sections (4.5.21.1 and 4.5.21.3); and Section 4.5.21.1 erroneously states that sewage collection networks could be used to provide water to the site.

Page 4-239

Impacts that occur from water-soluble contaminants that may runoff during site construction or site operation and that will not be removed in an oil water separator need to be described and quantified.

Section 4.6.12, Vegetation, Pages 4-258 - 259

A map of the proposed site with over lays of the plant communities present at the site would be extremely helpful, although this should be provided in the baseline section, rather than in the impacts section of the EIS. The terminology used for the plant communities should be that

EPA-140: See response to EPA-94. For the Spillman's Island alternative, **EPA-140** this section included information from the cities of La Porte and Morgan's Point.

EPA-141: See response to EPA-69.

EPA-142: See response to EPA-70.

EPA-141

EPA-143: This section has been revised.

EPA-144: See response to EPA-72.

EPA-145: See response to EPA-20. If a permit application were submitted,

a detailed mitigation plan would be required.

EPA-142

EPA-143

EPA-144

EPA-145

used in the description of impacts in this section. Once a map is provided, using the same terminology, the impacts to each of the communities can be visualized, described, and quantified The FEIS to include mitigative measures for the removal of upland shrubland/grassland, slat/brackish mars and fresh/brackish pond vegetation.

Section 4.6.13, Section 404/Section 10 Jurisdictional Areas (Wetlands and Open Water)

According to this two-sentence section, 5 acres of jurisdictional wetlands and 116 acres of open water would be "impacted." How? The FEIS needs to provide mitigative measures that will either reduce the loss of wetlands on the site, or will create wetlands elsewhere to reduce the impacts of removing the wetlands from the site.

Section 4.6.14, Terrestrial Wildlife, Pages 4-259 and Page 4-260

In Section 3, the species that are likely to inhabit this site need to be identified. The proponent needs to describe the wildlife associated with the plant communities mentioned. This section should provide mitigative measures that will be implemented and will lessen impacts on this site including specifically, mitigation for the waterfowl that will be displaced.

Please provide further investigation of the former/existing rookery and provide mitigation if the rookery is still present and active at the Alexander Island location and could be impacted by the activities at the site. This section needs to recognize that noise from equipment and increased human activities will disturb not only the wildlife on the site, but also on adjacent areas.

Section 4.6.15, Aquatic Ecology, Pages 4-260 and Page 4-261

This section needs to provide a discussion of the impacts on fish, benthos, water column, and nekton species in a quantitative manner. The DEIS indicates that impacts from dredging are anticipated to be minimal. Based on experience dealing with sediments from other ports, most port sediments contain concentrations of organics and metals that may adversely impact aquatic species, whether or not they exceed the thresholds established by the state. Suspension of sediments from dredging at construction or maintenance dredging as well as from storm water run-off will expose aquatic flora and fauna to concentrations of contaminants that will cause some adverse impacts, either acute or chronic. The potential impacts should be quantified on the more sensitive species.

The potential for spills of potentially toxic materials during construction and operation of the facility should be quantified; the impacts of those spills on the aquatic flora and fauna should be described in this section. Here or elsewhere the impacts to Essential Fish Habitat (EFH), i.e., impacts that are direct, indirect, and/or cumulative, need to be described. Negative impacts are only alluded to in this section.

Section 4.6.16, Endangered and Threatened Species, Section 4.6.16.2, Page 4-261

440622/020135 J-57

EPA-146: This section has been modified to clarify that the wetlands within the project footprint would be lost as a result of project construction at this site. If a permit application were submitted for this alternative, a detailed mitigation plan would be required.

EPA-147: The description of species observed on the site has been moved to Section 3.13. Construction and operation related effects to wildlife species and habitat are addressed in Section 4.6.14, Environmental Consequences. The EIS states that the potential for indirect effects to wildlife exists as a result of the increased threat from chemical or oil spills and from noise and other human related activities; however, the possibility of those effects is considered to be minimal and is not quantifiable.

The Alexander Island site is not the proposed alternative; therefore, no wildlife habitat mitigation has been proposed. If a permit application were submitted for this alternative, a detailed mitigation plan would be required.

EPA-148: See response to EPA-57.

EPA-149: The impacts section has been revised. Also see response to EPA-58 regarding spills.

EPA-148

EPA-146

EPA-147

EPA-149

Mitigative measures should be provided for to the sea turtles from increased traffic, and chemical spills or releases.

Section 4.7.17 Cultural Resources

This section does not identify whether impacts are likely under each alternative, they only identify presence or absence of cultural resources. Place an impact evaluation sentence at the beginning of each section, followed by support information, so the decision maker can tell at a glance whether significant resources will be impacted.

Section 4.6.18 Commercial and Recreational Navigation

This three-sentence section indicates that little impact would occur, a more reasonable statement than none would occur (as for the Pelican Island site). No projections of ship movements, however, supports this statement. There is no discussion of potential impacts on commercial fishing or recreational navigation.

Section 4.6.19 Land/Use/Recreation/Aesthetics

The "Labor Force-Related Impacts" discussion on page 4-263 identifies a total of 128 acres of land development that would be needed to support the in-migrant labor population. A statement about the availability of this amount of developable land should be included.

Section 4.6.20, Socioeconomics, Section 4.6.20.1, Population and Social Characteristics

This section fails to address the impact of project-related population changes on social characteristics of the population. Are there important impacts projected for, for example, age structure, median household income, poverty status, etc., that would have positive or negative effects on the affected community? This comment applies to all Build alternatives.

Section 4.6.20.1 fails to address the impact of project-related population changes on social characteristics of the population. Are there important impacts projected for, for example, age structure, median household income, poverty status, etc., that would have positive or negative effects on the affected community?

Section 4.6.20.3, Community Values

Is the Galveston Comprehensive Plan the same as the City of Texas City's plan? The proposed action analyzed the City of Texas City's plans, but not the Galveston Comprehensive plan? The analysis needs to be consistent. Also the preferred alternative discussed how the alternative would achieve the goal of the Texas plan, will this alternative achieve the same thing?

EPA-150: The Alexander Island site is not the proposed alternative; **EPA-150** therefore, no wildlife habitat mitigation has been proposed. If a permit application were submitted for this alternative, a detailed mitigation plan would be required. EPA-151: The EIS has been revised to include a summary of impacts **EPA-151** at the beginning of the cultural resources section for each alternative. **EPA-152:** This section has been revised to include a discussion of commercial fishing and recreational navigation at Alexander Island. **EPA-153**: See response to EPA-63. **EPA-152** EPA-154 and -155: See response to EPA-67. EPA-156: See response to EPA-94. For the Alexander Island alternative, this section included information from the City of Baytown. **EPA-153 EPA-154 EPA-155**

EPA-156

Section 4.6.20.4, Housing

This section only describes the demand for housing units for inmigrants, without assessing the resulting impact. What is the impact of the increased housing demand on the housing market? This section should address both availability of housing (is the demand for additional housing likely to be met in both the short and long run?) and housing prices or rent (would affordable housing be available for inmigrants due to the project, for current residents, and for inmigrants already expected to enter the area in the baseline scenario?).

Section 4.6.20.6, Employment by Sector

Section 4.6.20.6 notes that demand for construction workers as a direct result of the action is expected to be met by the available workforce and, therefore, concludes that there will be no inmigration of construction workers. This section should address potential inmigration, and associated secondary impacts (e.g. additional demand for housing and community services due to inmigration), due to indirect job growth in construction and other sectors.

Section 4.6.21 Community Infrastructure and Municipal Services, Page 4-273

The utilities analysis in this section is incomplete and poorly organized. The text acknowledges that a water supply analysis has not yet been performed. Natural gas is not mentioned, even though it was addressed in the baseline section (3.20.1). Wastewater is discussed in two different sections (4.6.21.1 and 4.6.21.3); and Section 4.6.21.1 erroneously states that sewage collection networks could be used to provide water to the site. Impacts that occur from water-soluble contaminants that may runoff during site construction or site operation and that will not be removed in an oil water separator need to be described and quantified.

The increase in volume of stormwater runoff due to development of the site needs to be quantified and any impacts to receiving environments (including increased scour, increased freshwater impacts on the marine environment, etc.) need to be described quantitatively and potentially mitigated. Impacts of the increased flow on the existing treatment plant that may receive wastewater from the site need to be addressed.

Section 4.7 Cedar Point Alternative

Section 4.7.3 Noise

This section adequately discusses roadway noise, but the discussion on construction does not address potential effects on receptors (no receptors are identified). There is no discussion of the noise that would be generated during operations. Please discuss this concern in the FEIS.

Section 4.8, Cumulative Effects

EPA-157: See response to EPA-69.

EPA-158: See response to EPA-70.

EPA-157

EPA-159: This section has been revised.

EPA-160: See response EPA-72.

EPA-161: See response EPA-34.

EPA-158

EPA-159

EPA-160

EPA-161

The cumulative effects of all the alternatives (rather than just the proposed site) need to be evaluated and compared. Section 4.8.6 should include a discussion of the sensitivity of models used to assess economic impacts to the inclusion of additional projects that are likely to be built. Are the results related to the proposed project in Section 4.2.20 (e.g., expected availability of workers for construction and operation) sensitive to inclusion of additional projects that are likely to be constructed? Are the multipliers from the Texas Input-Output Model, which are used to assess effects on employment and household income, sensitive to inclusion of additional projects? Cumulative impacts should assess the impacts of existing development and reasonably anticipated future development. Section 4.8.7 does not do that. Examples of cumulative impacts that should be evaluated and that were immediately apparent as absent are presented below:

- Cumulative impacts on the increased potential for hazardous materials spills on soils, groundwater and surface water need to be quantified and assessed. Additionally within this section, there needs to be a comparative evaluation of the number of hazardous materials sites within the considered radius of each proposed and alternative site and an assessment of the cumulative impacts of having more or fewer hazardous materials sites.
- Cumulative impacts to the vegetative and terrestrial wildlife communities (especially wetlands) of additional development in the Greater Houston area need to be quantified and assessed.
- The proponent needs to describe the cumulative impacts of routine dredging from this
 project and other routine dredging in the greater area of the proposed and alternative sites.
 Impacts that should be evaluated include impacts on the aquatic flora and fauna, impacts
 on T&E species.
- The impact of increased stormwater run-off from this project and other sites on sediment
 and water quality needs to be evaluated.

Pages 4-324 through 4-326

Cumulative impacts on water quality and hydrology should assess the impacts of existing development and reasonably anticipated future development. Section 4.8.8 does not do that. Examples of cumulative impacts that should be evaluated and that were immediately apparent as absent are presented below:

The proponent needs to consider the cumulative impacts of spills within the radius of
consideration from the hazardous materials assessment on both groundwater and surface
water quality in combination with the potential impacts from construction and operation
of the proposed and alternative facilities.

EPA-162

EPA-163

EPA-164

EPA-165

EPA-166

EPA-167

EPA-168

EPA-169

EPA-170

EPA-162: The Cumulative Effects assessment was performed on a regional basis, and the impacts of the proposed project would be similar at any of the alternative sites. Based on these factors, the results of the cumulative effects assessment would vary little if a separate assessment were performed for each alternative site. Therefore, the results of the assessment performed can be assumed to be valid for any of the alternative sites.

EPA163: The models used in the evaluation of economic effects assess the number of jobs that would be generated by the construction and operational expenditures of the project. While such models could, theoretically, be used to assess region-wide job production from a cumulative effects perspective, this would require specific information on direct expenditures for each project to be included in the modeling effort. Even if this information were readily available, such an assessment for the Houston metropolitan area is beyond the scope of this EIS and has not been completed by the H-GAC or the Texas Comptroller's office. Section 4.8.6 describes growth and employment trends in the region and references the information provided in the discussion of the No-Action alternative as a reasonable indication of economic effects that can be expected as a result of anticipated growth in the region.

EPA-164: Section 4.8.7 describes the trends in habitat losses related to past development in the vicinity of the project site, the types of development expected to continue in the region, efforts that are underway to minimize habitat losses, mitigating aspects of the proposed project that would decrease the contribution of the project to cumulative impacts on ecological resources, and controls that are in place to further minimize adverse ecological effects. As stated in Section 4.8.7, specific data regarding the extent of wetlands and habitats to be affected by future projects in the region are often not readily available, making precise quantification of these impacts impractical.

EPA-165: Section 4.8 has been revised to include a statement regarding cumulative impacts related to hazardous materials.

EPA-166: See response to EPA-164.

EPA-167: Discussions of potential cumulative effects of routine dredging activities has been added to sections 4.8.7 and 4.8.8.

EPA-168: Potential impacts of increased storm water runoff are discussed in Section 4.8.8 of the DEIS.

EPA-169: Impacts of existing and anticipated future development on water quality and hydrology are addressed in 4.8.8 through a methodology that correlates current and projected population to impervious cover.

EPA-170: Section 4.8 has been revised to include a statement regarding cumulative impacts related to hazardous materials.

J-61 440622/020135

- The cumulative impacts of dredging for the construction of this project and the routine
 maintenance dredging in the greater vicinity of the proposed and alternative sites need to
 be considered. Specifically, the impacts of contaminants associated with the sediment
 particles on water quality need to be assessed.
- Cumulative water quality impacts should include quantitative assessment of impacts to SVOCs, PCBs, VOCs, metals and pesticides. The fact that fish have elevated concentrations of organics and metals in their tissue would imply that the sediment and or the water column has substantial concentrations of these contaminants, making the request for these data in Surface Water section. Implementation of this project is likely to have cumulative impacts from spills on these concentrations and on the fish and shell fish in the area. These need to be recognized and potentially mitigated. Please discuss in the FEIS

Mitigation

With the exception of the wetland mitigation in Swan Lake for the Shoal Point alternative, there is no mitigation discussed for any other alternative for noise; physiography, topography, and bathymetry; energy and mineral resources; surface soils; Section 404/Section 10 jurisdictional areas; or commercial and recreational navigation (geology is unlikely to require any mitigation). It is not clear from the short and ambiguous discussions of impacts for these sections whether any mitigations would be required or not (although most sections imply or assert that none would be required). There was considerable discussion on the mitigation of noise impacts in the Bayport EIS, and presumably a similar discussion is warranted here. Please include in the FEIS.

EPA-171: Discussions of potential cumulative effects of routine dredging **EPA-171** activities have been added to sections 4.8.7 and 4.8.8.

EPA-172

EPA-173

EPA-172: Comment indicates that because "fish have elevated concentrations of organics and metals in their tissue" it implies that the sediment and water column have substantial concentrations of these contaminants. Possibly this comment refers to the consumption advisory/TMDL for dioxin in blue crab and catfish in the HSC and upper bay, including Bayport channel. Dioxins have been measured in sediments and tissue in the upper bay and HSC, most recently by PBS&J (2002). Detections of dioxins in water must await deployment of more sensitive equipment. The TNRCC has a TMDL study underway to quantify the sources of dioxins and develop a management plan to manage these sources. There is also a TMDL study underway on Patrick Bayou that includes mercury that is apparently associated with industrial activity. This location is upstream of any alternative sites. We agree that whatever contribution to contaminants that would be generated from additional container traffic would be added to some degree to whatever existed in the environment. However, there is no assurance that this would be additive. as it is doubtful that container traffic is a significant source of dioxins or other contaminants and that the spills from such traffic would be significant.

EPA-173: Mitigation has been proposed for the proposed alternative because the proposed alternative is the subject of the Section 404/10 permit application that triggered this EIS. If another alternative site were selected, a detailed permit application and mitigation plan would be required before the project could proceed.

Robert J. Huston, Chairman R. B. "Ralph" Marquez, Commissioner Kathleen Hartnett White, Commissioner Jeffrey A. Saitas, Executive Director



TEXAS NATURAL RESOURCE CONSERVATION COMMISSION

Protecting Texas by Reducing and Preventing Pollution

February 28, 2002

U.S. Army Corps of Engineers Galveston District CESWG-PE-RE P.O. Box 1229 Galveston, Texas 77553-1229

ATTN: Ms. Sharon Tirpak

RE: USACE Permit Application No. 21979

Dear Sir:

As described in the December 28, 2001, Joint Public Notice, the Draft Environmental Impact Statement (DEIS), and the permit application for the proposed Shoal Point Container Terminal, the City of Texas City (applicant) proposes to construct a 400 acre shipping container yard with 6 berthing areas and accompanying land access road on Shoal Point, an active dredge material placement area south of the Texas City Dike and adjacent to the Texas City Channel in Texas City, Galveston County, Texas. Project plans include the dredging of a new turning basin and the deepening of the Texas City Channel (including the Texas City Turning Basin, Industrial Canal, and Industrial Canal Turning Basin) from -40 feet MLT to -45 feet MLT. The applicant plans to develop the terminal in partership with Texas City International Terminals (TCIT), a joint effort of Stevedoring Services of America and Americana Ships. The purpose of the proposed facility is to meet a regional need for handling projected increases in container cargo activity.

The proposed Shoal Point Container Terminal is scheduled to be constructed in three phases. Phase I involves the construction of a 125 acre container yard, two berthing areas, and a four-lane access road connecting the terminal yard to Loop 197. Phase II would add another 125 acre yard and two berths and would include the dredging of the new turning basin and deepening of the Texas City Channel. The final phase of the proposed project calls for the construction of a 150 acre container yard and two additional berths. The estimated construction commencement dates for Phases I, II, and III are 2002, 2006, and 2014, respectively.

The impacts anticipated from the full build-out of the project include the following (all figures are approximate): 650.9 surface acres of dredging (11.9 million cubic yards (mcy) of new work material from the berthing areas, turning basin, and channel); 9.7 acres of open water fill (access road impacts predominantly to Swan Lake and the Texas City Hurricane Channel); 13.3 acres of hydrologically-connected wetland fill (container yard and access road impacts to areas along Loop 197, Swan Lake, the Hurricane Channel, and the northeast shoreline of Shoal Point); and 37.7 acres of hydrologically-isolated wetland fill (container yard impacts to areas within existing placement areas on Shoal Point). As compensation for the hydrologically-connected wetland impacts, the applicant proposes to construct inter-tidal marsh within 45 acres of the northern portion of Swan Lake, located immediately southeast of Shoal Point. Compensation is not offered for the hydrologically-isolated wetland impacts because they are pioneered wetlands within

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active placement areas and could be filled at any given time by routine disposal of maintenance dredge material.

Because the construction of the container yards involves the placement of fill in portions of the active placement areas (Cells A and B), a draft Dredge Material Management Plan (DMMP) has been appended to the DEIS to address the need to replace lost disposal capacity. The DMMP accounts for the beneficial use or disposal of all dredge material to be generated by the project as well as anticipated maintenance dredging material for the Texas City Channel and the Port of Texas City for the next 50 years. The plan calls for the creation of 1,308 acres of beneficial use sites near the project area (each with inter-tidal marsh/open water components) and the relocation and reconfiguration of the active dredge material placement areas on Shoal Point (PA 5 and 6).

Swan Lake is one of seven beneficial use sites planned through the proposed project. The estimated total acreage of the site, including the 45 acre mitigation area, is 363 acres. Historically, Swan Lake received contaminated wastewater discharges from the nearby Tex-Tin facility, which is currently a Superfund site undergoing remedial action. In addition, significant ground subsidence over the past 50 years has changed Swan Lake from what was once a shallow, intertidal embayment to a predominantly open water system. State and Federal Natural Resource Trustees (Trustees) are currently involved in efforts to restore a portion of Swan Lake using funds specifically targeted for this purpose. The Texas Natural Resource Conservation Commission (TNRCC) recognizes the dedication of Phase I new work dredge material toward this effort (designated as the "TNRCC Restoration Project" in the DMMP). The agreement to provide Phase I material for the Trustees' marsh restoration project represents the culmination of extensive discussions between the agencies, the applicant, and TCIT representatives.

The TNRCC is concerned, however, about the possibility that the full restoration of Swan Lake and the new construction of Beneficial Use Site 1 (BUS 1) will not be completed if the proposed project never progresses beyond Phase I. At the end of Phase I, the DMMP shows Swan Lake to be 21% complete and BUS 1 to be 18% complete with its containment levees 100% complete. The restoration of Swan Lake to pre-subsidence conditions and the associated benefit of capping existing, contaminated sediments are both high priorities for the TNRCC. Furthermore, though the proposed construction of BUS 1 is not a restoration effort, an incomplete build-out could result in a net environmental loss for the contained area. Please comment on whether a Phase I-only project can account for the completion of both beneficial use sites or whether measures can be implemented to leave any unfinished work, at a minimum, in an environmentally neutral state.

To maximize the restoration efforts in Swan Lake, the TNRCC requests that the DMMP include a clear representation of the volume of Phase I dredge material that will be made available specifically for the Trustees' marsh restoration project. Any amount of Phase I material not specifically dedicated for other purposes should be designated within the DMMP to the Trustees' project. The TNRCC requests that all Swan Lake marsh creation work scheduled to be performed during Phase II of the proposed project be consistent, or at least compatible with, the conceptual design of the approximately 45 acre mitigation site planned for Phase I, and the marsh to be created through the Trustees' project. Please provide information demonstrating any current or planned coordination efforts aimed at achieving this goal. Lastly, it is not clear who will be responsible for the construction, planting, monitoring, and success criteria of the mitigation site as well as all of the planned beneficial use sites. Please identify who will be responsible for these tasks.

Insufficient information is contained in the joint public notice, the DEIS, and the permit application to complete a water quality certification determination. The following issues must be addressed before a

TNRCC1-1: See response to EPA-10, regarding availability of new work material for use in Swan Lake and Beneficial Use sites.

If the project does not proceed beyond Phase I, the applicant would not be responsible for completion of the entire Swan Lake marsh restoration project or Beneficial Use sites. The USACE would assume responsibility for completion of Beneficial Use sites that the USACE uses for placement of maintenance material.

TNRCC1-2: See response to EPA-10. The applicant has contracted with an engineering firm to design both the 45-acre mitigation area and the entire Swan Lake marsh restoration project. The marsh design will be provided to the State and Federal Natural Resources Trustees for their use in the restoration project in Swan Lake. This should ensure compatibility of the various marsh restoration projects in Swan Lake. The applicant will be responsible for the construction, planting, monitoring, and success criteria of the mitigation site, and either the applicant or the USACE will bear these responsibilities for the Beneficial Use sites, depending on who bears responsibility for placement of the material in each Beneficial Use site.

TNRCC1-1

TNRCC1-2

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certification can be completed. Responses to this letter may raise other questions that will need to be addressed before a water quality certification determination can be made.

- Sediments targeted for new work dredging should be chemically tested for contamination. This
 sediment testing should be done, with the results submitted to the TNRCC for evaluation, before the
 permitting process is completed. New work sediments include those in the proposed berthing, turning
 basin, and Texas City Channel deepening areas. Testing of maintenance material to be used in the
 construction of beneficial use sites should be performed prior to placement of the material. Methods
 for coordinating TNRCC evaluation of all sediment analyses will need to be defined.
- 2. All best management practices planned for project use to reduce the short-term and long-term turbidity and suspended solids in the waters being dredged or filled will need to be described prior to issuance of the certification. The methods that will be used to minimize impacts to surface waters during the construction of the container yards, wharves, and access road will also need to be described.
- Effluent from placement areas PA5 and PA6 must be required to meet a 300 mg/l total suspended solids limitation.
- 4. Prior to issuance of the certification, additional details must be submitted to allow TNRCC to evaluate plans for stormwater collection and treatment on the project site. This information should account for the handling of stormwater runoff from the container yard, wharf, and access road areas both during and after construction.

The TNRCC looks forward to receiving and evaluating other agency or public comments. Please provide any agency comments, public comments (including copies of comments submitted during the January 29, 2002 public hearing), as well as the applicant's comments to Mr. Gregg Easley of the Water Quality Division MC-150, P.O. Box 13087, Austin, Texas 78711-3087. Mr. Easley may also be contacted by phone at (512) 239-4539, or by e-mail at geasley@tnrcc.state.tx.us.

Sincerely,

Jeffrey A. Saitas, P.E., Executive Director

Yexas Natural Resource Conservation Commission

JAS/GE/emh

Doug Hoover, City of Texas City, P.O. Box 2608, Texas City, Texas 77592 Cecilia Green, PBS&J, 206 Wild Basin Road, Suite 300, Austin, Texas 78746-3343 Joe Moseley, Shiner Moseley and Associates, Inc., 555 N. Carancahua, Suite 1650,

Corpus Christi, Texas, 78478 Chris Cornell, BERGER/ABAM Engineers, Inc., 33301 Ninth Avenue South,

Federal Way, WA 98003-6395

TNRCC1-3: New work sediment cores from the area to be dredged were tested for human contamination. Results are presented in Appendix D-4. As would be expected, no anthropogenic contaminants were reported in the analyses.

TNRCC1-3

TNRCC1-4

TNRCC1-5

TNRCC1-6

TNRCC1-4: In order to reduce suspended solids during dredging operations, the majority of dredged materials that are destined for Shoal Point would be deposited within the existing confined disposal areas. Shoal Point is an existing confined disposal site that is divided into three independent cells, with each cell having either an outlet or weir structure. These structures are designed to increase the time of concentration (decant) of the dredged material. Once the material has reached an acceptable concentration level, the structures are opened and the effluent is released to the discharge waters. The practice of utilizing the existing cell arrangement on Shoal Point has been effectively used by the USACE for approximately the last 20 years.

For the material that is destined for Swan Lake and the Beneficial Use site levees, there is no practical means of controlling turbidity other than minimizing the pumping distance so that clay balls suffer the least loss in transit.

Typical best management practices (BMPs) that may be used to control sediment and erosion during construction may include the following. Other BMPs may be added as the project progresses into the design phase.

- Stabilized Construction Entrance / Tire Wash
- Silt Fence
- Construction Roadway Stabilization
- Nets and Blankets
- Seeding
- Brush Barriers
- Dust Control
- Conveyance Ditches
- Interceptor Dikes and Swales

A Temporary Erosion and Sediment Control Plan and Storm-Water Pollution Prevention Plan will also be developed for the project as part of the TPDES permit applications.

TNRCC1-5: The return flows from PA 5&6, like other confined placement areas, will meet the TSS concentration limits in place at time of dredging.

TNRCC1-6: Storm-water controls would comply with Federal, state and local regulations in place at the time of the detailed design.

The design of the access corridor's storm water collection system will likely be performed in accordance with the latest Texas Department of Transportation design standards, and other state and local standards.

The container yard's storm-water collection system will likely be designed for a 10-year, 24-hour storm event. The storm-water runoff will likely be routed through oil/water separators prior to being released to a swale area. The swale area will act as a biofiltration/retention system prior to the waters being released to Galveston Bay.

A Temporary Erosion and Sediment Control Plan and Storm-Water Pollution Prevention Plan will also be developed for the project as part of the TPDES permit applications.

Robert J. Huston, Chairman R. B. "Ralph" Marquez, Commissioner Kathleen Harmett White, Commissioner Jeffrey A. Salias, Executive Director



TEXAS NATURAL RESOURCE CONSERVATION COMMISS: ON

Protecting Texas by Reducing and Preventing Pollution

March 18, 2002

Ms. Sharon Manzella Tirpak
Department of the Army
Galveston District, Corps of Engineers
P.O. Box 1229
Galveston, Texas 77553-1229

Dear Ms. Tirpak:

Please find our comments to the Draft Environmental Impact Statement (DEIS) for 1 c City of Texas City's proposed Shoal Point Container Terminal. We anxiously await the final Environmental Impact Statement (EIS), and are prepared to provide a positive General Conformi: Analysis if the following issues can be addressed to our satisfaction in the final EIS.

Over the last several years we have been working diligently with the interested prices associated with the proposed Shoal Point Container Terminal, including the local government: associated with this project, the U.S. Environmental Protection Agency, your agency, and various ansulting firms. This process was very important from a planning perspective and has allowed our a ency to provide these comments on the DEIS.

It is our understanding that not all dredging will be accomplished using the electric fredge powered by the electrical grid. Some dredging will have to be completed using a diesel g: terator to power the electric dredge due to extension cord issues. The Texas Natural Resource Commission (TNRCC) requests that the sponsors commit that this portion of the redging will be carried out only during the October 31 to April 1st time frame of each year. Ozone structure is most sensitive to nitrogen exide (NOx) emissions during spring, summer, and early fixmonths.

Second, the DEIS includes reductions associated with Senate Bill 5 programs
expected to make up the reductions from the repealed Construction Shift and Activated Purchase
of Tier 2/Tier 3 equipment. However, the project sponsors have made no commit nent to apply for
a grant, nor to require contractors to apply for a Senate Bill 5 grant as part of the
bidding process.
TNRCC recognizes that Senate Bill 5 grants are competitive in nature and even
the sponsors' construction contractors apply for a grant they may not receive
simple contract requirement requesting all construction contractors to make an tempt at securing
a Senate Bill 5 grant will ensure the TNRCC that these assumptions in the DEIS expected.

TNRCC2-1, 2-2, & 2-3: See response to EPA-5.

By letter to the TNRCC dated August 30, 2002 (Appendix H-9), the project sponsors have committed to:

- 1. Maximize shore power electric dredge during the construction of the project and utilize diesel generator power dredge only as necessary and only between the October 31st to April 1st time frame of each year.
- 2. Require the use of low NOx emissions technology on land-based diesel construction equipment. Construction contracts governing work occurring in calendar year 2005 and beyond will include language to require Tier 2/Tier 3 diesel equipment and add-on NOx control technologies, or more stringent requirements that might be in place at the time of construction. Contract documents will require contractors to apply for the SB 5 grant (or equivalent) to modify or purchase diesel equipment with low NOx diesel emissions technology. Compliance with this requirement and/or efforts to reduce NOx emissions by other technologies or methodologies will be used as evaluation criteria in selecting contractors.
- 3. Direct, through language contained in lease agreements or other contractual documents, all owners, tenants and/or operators of the Shoal Point facilities to exercise Best Management Practices (BMPs) relative to complying with the National Air Quality Standards and implementing the latest NOx control technologies. Additional BMPs may be considered and implemented in the future. A list of BMPs proposed for implementation by the project sponsors is attached to the letter (included in Appendix H-9 of this FEIS).

The FEIS (Section 4.2.1.2) and the Final General Conformity Determination have been enhanced to include the sponsor's commitments. Based on these commitments and other project information, the TNRCC provided a positive General Conformity Certification for the project by letter dated September 9, 2002. A copy of this letter is provided in Appendix H-9 of this FEIS.

TNRCC2-2

TNRCC2-1

P.O. Box 13087 • Austin, Texas 78711-3087 • 512/239-1000 • Internet address: Vivi Inrodustate box of model and make a product and respect to product and the state of the stat

Ms. Sharon Manzella Tirpak Page 2 March 18, 2002

are accurate. If application for an Senate Bill 5 grant is not made part of the Shoal Post construction contracts, then these emissions reductions should not be relied upon in the final Hill

Lastly, although our agency has limited legal authority under the Corps' general conficiently rule over long term operational emissions associated with a project such as this, our obligation to ensure compliance with the National Ambient Air Quality Standards is not diminished fherefore, we request that the sponsors of this project commit to require all future tenants and us: s of the Shoal Point facilities to utilize Best Management Practices and implement the latest clear ast technology practicable. Absent such a commitment, the TNRCC is unable to concur that the 1 cility will not have an impact on the environment.

TNRCC2-3

With these comments addressed satisfactorily in the final EIS, we will be able to provide a positive General Conformity Analysis for this project pursuant to 30 Tex. Admir. . lode §101.30 (h)(1)(E)(i)(I) upon completion of the EIS.

Sincerely,

Jeffrey A. Saras, F.E., Executive Director Texas Natural Resource Conservation Commission



February 15, 2002

COMMISSIO

KAYHARINE ARMETRONG IDSAL CHAIRMAN, SAN ANTONIO

> ERNEST ANGELO, JA VICE-CHAIRMAN, MIDLAN

> > JOHN AVILA, JR. FORT WORTH

JOSEPH B.C. FITZSIMONS SAN ANTONIO

ALVIN L. HEN

РИКИР МОНТООМЕН

DONATO D. RAMOS

SAN ANTON

LEE M. BASS CHAIRHAN-EMERITUS FORT WORTH

ROBERT L. COOK

Give Thanks for the Memories...



Give to the Lone Star Legacy Endowment Fund Ms. Sharon Tirpak Regulatory Branch U.S. Army Corps of Engineers P.O. Box 1229 Galveston, Texas 77553-1229 Mr. Mark Fisher, 401 Coordinator Mail Code 150 TNRCC P.O. Box 13087 Austin, Texas 73711-3087

te: Shoal Point Draft Environmental Impact Statement and Permit Application 21979

The City of Texas City proposes to construct a 6-berth marine container terminal on approximately 400 acres of an active, leveed dredged material placement area, known as Shoal Point. The project would require the construction of a container yard, access roadways, wharves, berthing area and turning basin. In addition, the proposal includes deepening the Texas City Channel to -45 feet MLT. Eleven million cubic yards of material would be dredged from the channel, proposed wharf area and turning basin. Surface area for the project dredging is approximately 651 acres. Approximately 13.5 acres of inter-tidal wetlands and 9.7 acres of open water would be filled during construction of the container yard and access roadway. In addition, to compensate for the lost dredged material disposal capacity on Shoal Point approximately 357 acres of open water would be filled for the construction of beneficial use site 1 (ultimately for the creation of inter-tidal marsh).

The project would be constructed in three phases. Phase I would be the construction of an access roadway, 125-acre container yard and two berths, with associated dredging. Phase II would be the construction of a 125-acre container yard, two berths and turning basin, with associated dredging and deepening of the channel. Phase III includes the construction of a 150-acre container yard and two berths with associated dredging. Construction of the 6-berth terminal would be completed by 2016. As mitigation for wetland impacts the applicant is proposing to construct 45 acres of intertidal marsh in the northern portion of Swan Lake, adjacent to the project site.

Staff has reviewed the Shoal Point Draft Environmental Impact Statement. The attached comments deal with both the document's compliance with National Environment Policy Act (NEPA) requirements and potential impacts to fish and wildlife resources.

4200 SMITH SCHOOL ROAD AUSTIN, TEXAS 78744-3291 512-389-4800 www.ipind.state.tx.us

To manage and conserve the natural and cultural resources of Texas for the use and enjoyment of present and future generations.

Ms. Sharon Tirpak, page 2 Permit Application 21979

Questions can be directed to Cherie O'Brien in Clear Lake (281-335-0798 ext. 26), or to Tom Heger in Austin (512-389-4583).

Sincerely,

Robert W. (Bob) Spain

Assistant Director, Resource Protection Division

RWS:COB:JRM:msf

Ms. Sharon Tirpak, page 3 Permit Application 21979

Transmission Line

Texas Parks and Wildlife is concerned with the proposed location of the transmission line. Page 2-25, of the Draft Environmental Impacts Statement (DEIS) states,

"The proposed routing of the transmission line would be along the northern fringe of the Galveston County Discharge Canal."

The proposed route runs adjacent and parallel to the Galveston County Discharge Canal (Texas City Discharge Canal). It also parallels several dredged material placement areas that receive, depending on water depth conditions, large concentrations of shorebird and waterfowl usage. Birds are known to collide with aerial transmission lines, called strikes, stunning the bird or killing it. If stunned, birds are vulnerable to many predators that normally would not be a threat. Due to the construction method (aerial) and close proximity of the route to the dredged material placement area and Galveston Bay, TPW recommends an alternate route be considered.

In a letter dated April 4, 2001 from Rob Reid of PBS&J, TPW was asked to assess potential impacts from the proposed project. Two routes were identified: Route 1, a single-pole aerial transmission line running adjacent to and parallel to the Texas City Discharge Canal. Route 2, beginning at the existing Texas City Main Substation, running through an urbanized/industrialized area of Texas City, then directionally bored to the proposed Mega Port Substation. In a response letter dated May 11, 2001, TPW provided comments recommending Route 2 for the same reasons listed above. TPW continues to recommend Route 2 or a similar alternate route.

The Migratory Bird Treaty Act (MBTA) implicitly prohibits intentional and unintentional take of migratory birds, including their nests and eggs, except where permitted. Measures should be taken to ensure that migratory bird species within and near the project area are not adversely impacted by construction. The U.S. Fish and Wildlife Service should be consulted if project activities could potentially result in the take of any migratory bird species.

2.4.2.4 Roadway Access

A new access corridor would provide access from the terminal location to Loop 197. The proposed access corridor would have a 60-foot top width, consisting of four 12-foot lanes and two 6-foot shoulders. The bottom width will vary depending on construction method, structural wall or typical embankment section with 2:1 side slopes.

The access road would follow the southern side of the canal right-of-way (ROW) to the Shoal Point DMPA. To ensure that the roadway prism fits within the Galveston County ROW, the roadway would have a structural wall along the

TPW-1

TPW-2

TPW-3

TPW-1 & TPW-2: The proposed electric transmission line is now planned as a private line from the tie-in point with a proposed Texas-New Mexico Power facility near Loop 197 to the container terminal. The proposed alignment of the transmission line has been added to discussions in the FEIS (see Shoal Point alternative description in Section 2.4.2.6). The alignment corridor would be along the southern fringe of the Galveston County Discharge Canal, within the footprint of the proposed access road. Just east of Swan Lake, the transmission line would deviate from the proposed access road and continue along the west side of Shoal Point, along the existing levee road to the terminal (See Figure 2.4.2-1). This alignment avoids additional impacts from the transmission line by sharing right-of-way with the proposed access road for much of its length. To minimize the potential for bird strikes along the transmission line, aviator balls would be installed. Section 4.2.14 provides more information regarding the use of aviator balls.

TPW-3: See response to FWS2-4.

Ms. Sharon Tirpak, page 4 Permit Application 21979

north face bordering the canal. The wall would minimize the disturbance to the existing canal. In the vicinity of Swan Lake, the structural wall on the south side would be terminated and the roadway would consist of a typical embankment section, resulting in the toe of the roadway slope projecting into Swan Lake approximately 120 feet south of the existing shoreline.

This portion of the project would impact approximately 13.3 acres of intertidal wetland and shallow open water habitat within and adjacent to Swan Lake. The applicant has taken measures to minimize the disturbance to the Galveston County Discharge Canal but has not used the same measures to avoid or minimize the disturbance to the wetland habitat within the Swan Lake area. TPW recommends the applicant evaluate realignment, the use of structural walls or other construction methods on the south side of the proposed roadway along Swan Lake in order to avoid and minimize disturbance and the amount of fill into wetlands within and adjacent to Swan Lake.

Cross Section A of Sheet 5 in the Clean Water Act Section 404/Rivers and Harbors Act Section 10 Permit Application (Appendix A) indicates that 100% of the proposed roadway will constructed within an intertidal area. If this is an accurate depiction of the road location and the habitat type to be impacted, TPW recommends the applicant evaluate realignment, the use of structural walls, or other construction methods in order to avoid and minimize disturbance and amount of fill into wetlands.

As stated above the applicant has taken measures that would minimize the disturbance, i.e. fill, to the Galveston County Discharge Canal but as proposed the canal would still lose some of it's existing functions and values. Currently the south side of the Galveston County Discharge Canal is intermittently rip-rapped and has a vegetated fringe marsh (some areas sparsely vegetated) the length of the canal. Both the vegetation and the rip-rap serve to slow the water down and increase the amount of time the water stays in the canal. This improves water quality by allowing suspended sediments to fall out before reaching the Texas City Channel (segment 2437), an impaired water body. Additionally, the proposed roadway and associated structural wall would be filling shallow water habitat, both vegetated and rip-rapped. Near-shore shallow water habitat provides important feeding and refuge habitat for many juvenile fish and aquatic invertebrates. Migratory wading birds and shorebirds also utilize shallow near shore habitats for feeding.

TPW recommends the applicant place rip-rap the entire length of the structural wall where it interfaces the canal. The rip-rap should have a minimum 3:1 slope starting at the mean high tide line sloping away from the structural wall.

Dredge Material Management Plan (DMMP)

TPW-4: Wetland delineations have determined that approximately 4.2 acres of fringe marsh occurs along the proposed access corridor within Swan Lake. With the above-water groundline surface only being approximately 30 feet in width, it is impossible to establish a 60-foot roadway prism in this area without impacting the fringe marsh and adjacent shallow open water habitat. As a result the wetlands impacts are considered unavoidable and were included in the wetland mitigation calculations.

In consideration of this impact, the applicant has placed the wetland mitigation site in close proximity to the disturbed wetlands near the access corridor. If the applicant were to construct a vertical wall along the southern edge of the roadway within Swan Lake, wave refraction/reflection would cause unwarranted harm (i.e., erosion) to the proposed mitigation site.

Overall the access corridor in the proposed location has the least impact of all alternatives reviewed. Also see response to FWS1-2.

TPW-5: The use of vertical or other steep walls to reduce the width of the footprint of the road base would have the undesirable result of erosional wave action not only destroying or damaging wetlands, but would also be vulnerable to undercutting and collapse. Also see response to FWS1-2.

TPW-6: As noted, the applicant has taken measures to minimize disturbance to the Galveston County Discharge Canal. Placing rip-rap within the canal prism would effectively reduce the cross-sectional area of the canal. Reducing the cross-sectional area of the canal would result in an increased velocity within the canal, possibly producing scour within the footprint and eliminating "refuge habitat for many juvenile fish and aquatic invertebrates". The addition of the rip-rap would in this case not be beneficial to the environmental aspects of the canal but rather a detriment.

TPW-6

TPW-4

TPW-5

Ms. Sharon Tirpak, page 5 Permit Application 21979

The DMMP is missing the specific restoration requirements (goals, objectives, performance standards, monitoring methods, and remedial actions) of Swan Lake as it was coordinated in the previous Draft DMMP.

The DMMP does not adequately address possible impacts from fluid mud flows (FLUMF) during levee construction. Part D- Beneficial Use Sites, Figure 5 Stabilization of Dredged Volume, does include the following:

Objective, "Minimize loss of material from the BUS during construction"

Performance Standard, "No visible dredge fans outside the BUS footprint"

These refer more to the use of dredged material inside an already constructed confined disposal area. TPW is concerned about impacts to adjacent and surrounding habitats, particularly oyster shell habitat, from FLUMF during the construction of the containment levees of the BUS. In a report prepared for the U.S. Army Corps of Engineers, Atkinson Levee Fluid Mud Flow Report, December 2001, the results report the FLUMF moved between 1,900 and 2,500 feet away from the north and east levee and more than 2,800 feet from the south levee. The general thickness of the FLUMF ranged between 12-29 inches within 250 feet of the levee becoming a negligible thickness between 1,300-2,200 feet from the levee, depending on the transect.

The applicant should provide more information on distance of the proposed BUS levees to the "avoided oyster shell areas" and potential impacts with regards to FLUMF. Mitigation efforts such as avoidance, minimization, and compensation should be considered in the DIES.

DMMP 2.1 Selection of Reference Marsh

The selected reference marsh is intended to be used as a baseline to compare the created dredged material intertidal habitats/ beneficial use sites (BUS) to a healthy productive marsh system.

"Natural reference marshes should be within 5 miles of the dredged material marsh being assessed and should have a size similar to that of the dredge material habitat being assessed."

"Exact locations of natural marshes should be randomly selected."

The geographic restrictions and selection method as currently described do not ensure that a healthy system would be selected to serve as the baseline for the comparisons. Selection of the reference marsh should be discussed and agreed upon with the state and federal agencies that would be providing technical review during the creation and completion of the BUS. Likely agencies are (as listed in

TPW-7: A flow chart labeled as "Figure 10 – Swan Lake Restoration" has been added to the DMMP.

TPW-8 & 9: Comments noted. See response to FWS1-7. The USACE typically does not require compensatory mitigation for impacts related to creation of Beneficial Use sites because of the habitat value associated with beneficial uses as compared to traditional placement of dredged material (i.e., in upland placement areas).

TPW-10: The DMMP was revised to indicate the following: "Selection of reference marshes shall be discussed and agreed upon with the Federal, state and local officials that will be providing technical review during the creation and completion of the BUS. Likely agencies are the EPA, USACE, NMFS, FWS, USCG, TNRCC, TPWD, and GLO".

TPW-9

TPW-8

TPW-7

TPW-10

Ms. Sharon Tirpak, page 6 Permit Application 21979

Section 2.3 Environmental Compliance) Environmental Protection Agency, U.S. Army Corps of Engineers, National Marine Fisheries Service, U.S. Fish and Wildlife Service, U.S. Coast Guard, Texas Natural Resource Conservation Commission, Texas Parks and Wildlife Department, and Texas General Land Office.

2.7.2 Vegetation

This section discusses the advantages to initial planting efforts such as prevention or delayed establishment of nuisance plant species or lack of species diversity, accelerated consolidation of dredge material, erosion protection through root mat development, habitat improvements with respect to fish and wildlife, and nutrient dynamics. It discusses the ultimate goal of the BUS, i.e. vegetation to abundantly cover the landscape. This section lists plants that are considered important contributors to a community structure but does not discuss a planting schedule or plan. Section 2.5.2 Dredge Material Placement Techniques states:

"The site shall then be allowed to consolidated and develop vegetative communities."

TPW recommends the applicant develop a detailed planting schedule, for each BUS, which includes species to be planted, number of individual species to be planted, planting densities, time lines, success criteria, and remedial actions if success criterion are not met.

Proposed Mitigation, Sheets 10 and 11 of the Clean Water Act Section 404/Rivers and Harbors Act Section 10 Permit Application (Appendix A)

As compensation for filling 13.34 acres of intertidal wetlands and shallow water habitat the applicant is proposing to construct 18 acres of low marsh, 13.5 acres of intermediate high marsh, and 4.5 acres of sea grass, within a 45-acre area of Swan Lake. Nine acres would remain open water.

In the 1950's, Swan Lake was a shallow intertidal embayment surrounded with estuarine intertidal emergent wetlands dominated by Spartina alterniflora. A barrier island protected by an oyster reef physically separated Swan Lake from Galveston Bay. Historically, Campbell Bayou was the only tidal connection between Swan Lake and Galveston Bay. Over the past 50 years, the Spartina alterniflora marsh surrounding Swan Lake has completely disappeared in some areas and has been reduced to a thin fringe and small remnant islands in others. Much of the barrier island that protected the Lake's inner waters and fringing wetlands has suffered from subsidence and erosion and is now below the water's surface, no longer providing protection.

In 1991, as mitigation, a 1,500-foot long breakwater was constructed from the northern shoreline of Swan Lake between the remnant barrier island and Galveston Bay. By recreating the barrier island skeleton, the breakwater replaced

TPW-11: The DMMP is a plan. The beneficial use program is at its infancy and as a result many things are constantly changing, including planting patterns. Detailed planting schedules would be formulated prior to planting. Because this is a 50-year plan, a "lessons learned" approach should be used.

Flow charts were included in the DMMP, which give guidance to the designer during the design process. The flow charts include success criteria and remedial actions to be considered.

TPW-11

Ms. Sharon Tirpak, page 7 Permit Application 21979

the functions of the former barrier island. The breakwater successfully protects portions of existing marsh and created *Spartina alterniflora* marsh, promoting accretion of both.

We recommend Spartina alterniflora as the target species for both compensation and restoration efforts within Swan Lake, not high marsh or sea grass associated species. There can be a minimal allowable amount (a certain percentage) of high marsh species, but Spartina alterniflora should be the target species. While sea grass beds were historically present in the Swan Lake area, the conditions that formerly supported sea grass beds within Swan Lake no longer exist. Swan Lake is no longer a protected embayment surrounded by vast Spartina alterniflora marshes with excellent clarity of its waters, as described by the U.S. Biological Survey (the precursor of the U.S. Fish and Wildlife Service). Today Swan Lake is a turbid open embayment subject to wave fetch from the south and southeast, the dominant wind directions of Galveston Bay. Sea grass habitat is not the habitat type proposed to be filled and therefore attempts need not be made to create it. Once the marsh restoration efforts of Swan Lake are complete this area will be better suited for sea grass restoration efforts.

As discussed in several meetings between the applicant, their consultants, and resource agencies, the 1960-1963 aerial photographs illustrate the footprint of the marsh that TPW recommends be mimicked for both compensation and restoration requirements within Swan Lake. The conceptual design of the proposed mitigation site presented in the DEIS does not include our previous recommendations.

TPW-12: The mitigation drawings have been revised to reflect *Spartina* alterniflora as the target species. However, a buffer species of some highmarsh species is also warranted because of the close proximity of the access corridor to the mitigation site. Also see responses for NMFS-8 & 9 and EPA-11.

TPW-13: The applicant has contracted with an engineering firm to design the proposed mitigation area and marsh restoration in Swan Lake. Input from the resource agencies will be incorporated into the design.

TPW-12

TPW-13

FEB 1 9 2002

TSSWCB-1: No response required.



TEXAS STATE SOIL AND WATER CONSERVATION BOARD

311 North 5th P.O. Box 658 Temple, Texas 76503-0658 (254) 773-2250 Fax (254) 773-3311

February 14, 2002

Ms. Sharon Manzella Tirpak Regulatory Branch, CESWG-PE-RE U.S. Army Corps of Engineers PO Box 1229 Galveston TX 77553

Dear Ms. Tirpak:

We have reviewed a copy of Public Notice, Permit Application No. 21979, Applicant - City of Texas City. We offer no comments at this time.

TSSWCB-1

Sincerely,

See Muny

Lee Munz Planner

APPENDIX J-2 INTEREST GROUP COMMENTS AND RESPONSES

The Village of



FEB 19 2002

VBV-1

VBV-2

VBV-3

2929 HIGHWAY 6 SUITE 100 BAYOU VISTA, TEXAS 77563 (409) 935-8348

February 15, 2002

Colonel Leonard D. Waterworth District Engineer, Galveston District Department of the Army, Corps of Engineers P.O. Box 1229 Galveston, Texas 77553-1229

Dear Colonel Waterworth:

As the mayor of Bayou Vista, I am extremely concerned with the probable negative human and environmental impact that the proposed Shoal Point Container Terminal is going to have on traffic congestion, highway public safety and the City of Bayou Vista and Omega Bay subdivision property values if container truck traffic exits on the Exit 7, I-45 feeder road fronting the Omega Bay subdivision and goes through the Texas City Wye/Loop 197 interchange as currently proposed. We have reviewed the Draft Environmental Impact Statement (DEIS) for the Texas City proposed Shoal Point Container Terminal and even with our limited understanding of the DEIS process, we find the traffic impact analysis sections to be inconsistent, deficient and totally inadequate.

We believe the DEIS must be significantly revised because as we understand it, this DEIS does not comply with the National Environmental Policy Act (NEPA). The DEIS lacks the necessary information needed to realistically and adequately access the real affects of the proposed project on the quality of the human environment as required by NEPA. Information in the DEIS is totally inadequate to assess container truck traffic impacts to the City of Bayou Vista, the Omega Bay subdivision and surrounding private residences and businesses in the area of the Texas City Wye (a large and complex interchange of highways 6, I-45, 3, 146 and Loop 197) because: 1) only one assumed container truck trip scenario, on one day of one year, was examined; 2) only existing highway's for proposed container truck routes were examined; and 3) the DEIS did not identify any mitigation measures as required by NEPA. In fact, the DEIS did not even address any potential container truck traffic mitigation options because we believe the DEIS model was manipulated in such a way to show that hundreds of thousands of new container trucks per year, beginning in 2005, passing down the Exit 7 access road and through the Texas City Wye interchange would have absolutely no negative environmental and human environment impacts whatsoever.

We categorically reject this finding based on a complete lack of substantive and scientific data in the DEIS and Appendices to support it.

VBV-1: As discussed in Section 4.2.19 of the DEIS, the predominant impacts on traffic loads on IH 45 would be caused by regional growth, with some additional impact, primarily in the form of truck traffic from the proposed project. Some improvements will be needed to accommodate projected traffic volumes, with or without the project, to maintain an acceptable level of service.

In response to public comments received from many residents of communities located near Exit 7 on IH 45, public officials representing Galveston County and the cities of Texas City and La Marque have initiated discussions with TxDOT regarding the possibility of developing an alternative route for trucks to use as access between the proposed container terminal at Shoal Point and IH 45 (see Appendix H-15). In addition, County Judge Jim Yarbrough and the cities of Texas City and La Marque have sent letters to the USACE stating that they have retained a consultant to study the feasibility of, and to identify, an alternative truck route (see letters in Appendix H-15). Also see response to FL1-1 (Form Letter 1 in private citizen comment responses) for more details.

The EIS has been revised to include sections on residential property values (see sections 3.20.10, 4.1.20.8, 4.2.20.8, 4.3.20.8, 4.4.20.8, 4.5.20.8, 4.6.20.8, and 4.7.20.8).

Also see response to EPA-33, regarding traffic safety. The traffic impact analysis was performed using standard methods for this type of study. Modeling was performed by H-GAC.

VBV-2: The truck trip scenario used in the analysis was based in part on the results of an origin/destination study conducted at the Barbours Cut container terminal facility, which is considered to be representative of the container traffic that can be expected at the proposed project. In addition, the scenario was based on the results of modeling performed by H-GAC to determine the routes most likely to be taken by truck traffic, considering the origin/destination data from the Barbours Cut study.

The existing highway system was used for the analysis because of the uncertainties associated with projecting locations of future highways. TxDOT, not the applicant, would control the timing and location of any future public highways.

The applicant would not be able to implement mitigation measures on TxDOT property (i.e., along major public roadways). As discussed above, local officials have initiated discussions with TxDOT regarding the possibility of developing an alternate route for the projected truck traffic.

VBV-3: Comment noted.

Colonel Leonard D. Waterworth Page 2

We request a supplemental DEIS be undertaken because of such a lack of required NEPA analysis of substantive, realistic data and lack of any relevant scientific justification for any of the traffic impact analyses conclusions in the current DEIS. It is obvious to us that selected numbers and percentages were used in the DEIS model to cause results to show absolutely no negative environment (air and noise) impacts or negative impacts to the human environment of the residents of the City of Bayou Vista, Omega Bay subdivision and all other private residences and business in the vicinity of the Texas City Wye highway interchange. We request the supplemental DEIS analyze the I-45 south Exit 9 shunt road construction behind the Texas City dike to Loop 197 (approximately 0.4 to 0.5 miles) as the major mitigation action to be implemented to alleviate the unacceptable and indefensible adverse impacts that will occur to the residents of the City of Bayou Vista and Omega Bay quality of life and human environment, not to mention the millions of dollars of lost property values to homes and businesses when the thousands of container trucks begin using the Exit 7 feeder road and Texas City Wye interchange every day, 365 days a year in 2005.

Finally, we request a meeting with you, all the mayors of the surrounding cities directly impacted by the proposed container truck traffic, our Texas legislative representatives (Senate and House), the Galveston County Judge and Commissioners, Texas Congressman Nick Lampson, Texas City representatives, the Shoal Point representatives, and the DEIS contractor to discuss our concerns with this totally inadequate DEIS, as stipulated in this letter. This meeting should take place prior to the supplemental DEIS being initiated.

If your staff has any questions, please have them call me, or in my absence, Mayor Pro Tempore Ross Leago or Alderman William Jackson at the Bayou Vista City Hall (409-935-8348). Thank you for the opportunity to review this DEIS.

Sincerely,

Ross Leago Mayor - Pro-Tem

City of Bayou Vista

Congressman Nick Lampson Galveston County Judge and Commissioners Texas Legislators (Senate and House) Mayors of League City, La Marque, Dickinson, Santa Fe, Hitchcock, Texas City, Galveston, Tiki Island Bayou Vista Board of Aldermen Bayou Vista City Attorney Director, MUD 12

VBV-4: Comments noted. Additional information regarding traffic and safety has been included in Section 4.2.2.9 of the FEIS. A detailed noise analysis for the residents of Omega Bay has been added in Section 4.2.3 of the FEIS.

In regards to the use of Exit 9 for an alternative route, see response to VBV-1.

VBV-5: Comment noted.

VBV-4

VBV-5



18 February 2002

Ms. Sharon Manzella Tirpak Regulatory Branch, CESWG-PE-RE U.S. Army Corps of Engineers P.O. Box 1229 Galveston, TX 77553-1229

Re: Draft Environmental Impact Statement

Texas City's Proposed Shoal Point Container Terminal

Dear Ms. Tirpak:

Enclosed please find the comments of the Galveston Bay Foundation regarding the above proposed project. We appreciate the opportunity to provide these comments and look forward to your response.

Very truly yours,
Anda Thead

Linda R. Shead Executive Director

Enclosure

17324-A HIGHWAY 3 • WEBSTER, TX 77598 • (281) 332-3381



COMMENTS ON THE DRAFT ENVIRONMENTAL IMPACT STATEMENT FOR TEXAS CITY'S PROPOSED SHOAL POINT CONTAINER TERMINAL

February 18, 2002

The Galveston Bay Foundation continues to be concerned about the impacts to Galveston Bay from Texas City's Proposed Shoal Point Container Terminal. Galveston Bay is recognized in the Clean Water Act as an estuary of national significance, based primarily on its fisheries productivity. The essential keys to this productivity are salinity balance, wetlands habitat, and water quality. The proposed project will have significant and avoidable impacts to wetlands, salinity and water quality, as well as impacts to commercial and recreational fishing. As noted on page 2–48 in the Draft Environmental Impact Statement (DEIS), two alternatives, other than the proposed project, "appear to have the least negative impacts on the natural and human environment."

Specific weaknesses in the Shoal Point DEIS are addressed in the comments below.

Section 2.4 DESCRIPTION OF ALTERNATIVES, INCLUDING THE PROPOSED ACTION

In 2.4.1, No Action (No-Build) Alternative, the DEIS states an assumption that a currently-planned Federal feasibility study to address deepening the Texas City Channel would show this deepening as justified, and that the "dredging activity would likely proceed," whether or not the Shoal Point project is permitted. With a feasibility study only being planned and not yet implemented, this assumption is not justified.

Furthermore, the dredging issue is not consistently treated in the DEIS. In 2.4.2.1, (Shoal Point) Navigation, the project is defined to include private deepening of the Federal channel during Phase II. In Section 3.1, New Work Dredging, of the Dredge Material Management Plan, the statement is made that, "The Shoal Point Container Terminal project proposes to dredge the channel to -45.0 MLT." In Section 4.1.4, Physiography, Topography, and Bathymetry, on environmental consequences, future deepening and widening is once again proposed to be part of the No Action Alternative. In Section 4.8.10, Present and Future Actions, deepening of the Texas City Channel is not included in the navigation section of specific actions.

In spite of these ambiguities, dredging to -45.0 MLT is clearly anticipated in some fashion to be part of the proposed project, and the impacts of this dredging must be included in this DEIS.

proposed alternative must meet the purpose and need for the project, preferably with minimal impacts to the environment. **GBF1-1:** To clarify, the language has been changed to "If this study indicates that deepening of the channel is justified...".

GBF1-2: The applicant has requested a permit to deepen the channel so that deepening may proceed with private funding if the Federal project does not proceed. A text insert is provided in Section 4.8.11.3 to make the discussion of the dredging issue more consistent.

GBF1: The purpose of the alternatives analysis in an EIS that is triggered by a

regulatory action is to disclose potential project impacts and to provide the permitting agency (in this case, the USACE) comparative information to determine whether or not to issue the permit (i.e., whether or not the proposed

action is environmentally acceptable). The proposed alternative is not necessarily the alternative with the least negative impacts. Customarily, the

GBF1-3: The impacts of dredging to -45 feet MLT are included in the analysis.

GBF1-1

GBF1

GBF1-2

GBF1-3

Shoal Point DEIS Comments February 18, 2002 Page 2

Section 3.17 COMMERCIAL AND RECREATIONAL NAVIGATION

No mention is made in this section of the chapter on Affected Environment of the one-way traffic in the Texas City Channel, but impacts on this traffic pattern are discussed at length in the description of the proposed project, Section 4.2.18, Commercial and Recreational Navigation.

GBF1-4

GBF1-5

GBF1-6

GBF1-7

GBF1-8

GBF1-9

Section 4.2 SHOAL POINT — APPLICANT'S PROPOSED SITE

In 4.2.10, Surface Water Quality and Hydrology, modifications in water circulation are listed among the main effects of the proposed project, yet this issue is not further addressed in this section, nor are salinity impacts from the proposed channel deepening. Full hydrodynamic modeling of the impacts of the proposed channel and ship traffic must be performed and reported in the DEIS.

In 4.2.10.3, Operational Effects, stormwater quality issues are dismissed with the statements that, "The facility would be required to abide by the Texas Pollutant Discharge Elimination System (TPDES) construction and operation stormwater permits. Details of the stormwater system would be defined during final design of the project facilities." This does not address the "nonpoint" source water quality impacts of the proposed project, which could be substantial given the use of heavy mechanical equipment on container terminal site, and including the impacts from the access road. Nor is mention made of any water quality protection or mitigation measures. Also, the impacts of ballast water discharge are not discussed, only the regulations that are intended to minimize the risk through voluntary ballast water exchange in the open ocean.

In 4.2.10.5, Accidental Spills, no documentation is provided to support the statement that, "fuel spills are rare and, typically, such spills are quite small."

In 4.2.10.6, Habitat Changes, the DEIS states that some of the main changes would include "converting Swan Lake's 363 acres of bay bottom to tidal wetland." In Appendix G of the DEIS Appendix B, Dredged Material Management Plan Shoal Point Container Terminal, the Phased Element Drawings show, in drawings CS-1 and 2, that the filling of most of Swan Lake would occur in Phases I and II.

Since 1964 major subsidence occurred which resulted in Swan Lake, a secondary bay and excellent fish and shellfish nursery area, losing most of its fringe marshes. Instead of dredged material to restore this previously excellent nursery area, the applicant's engineering consultants propose to restore only the wetlands lost on the north shore at Swan Lake in Phase I Drawing CS-1. In Phase II, Drawing CS-2, the northern three-fourths of Swan Lake's open waters would be converted to marsh, while the subsided and eroded east and west shoreline marshes would not be restored.

GBF1-4: Section 3.17 has been revised to address the comment.

GBF1-5: In response to the comment, a section has been added to address potential circulation and salinity effects (Section 4.2.10.6 of the FEIS). With regard to modeling of ship traffic, we note that when a federal feasibility study of channel enlargement is performed it has become standard practice to employ vessel traffic simulation techniques to evaluate the channel design in relation to the expected traffic. This may be especially important in evaluating a range of channel dimensions that might be considered in a feasibility study. However, in this permit application that includes an authorization to deepen to -45 feet MLT with the existing bottom width, there does not appear to be a strong need for traffic simulation. The existing crude carrier traffic in the channel is typically similar in dimensions and greater in displacement to the container carriers that might take advantage of a 45-foot channel. This can be seen in the attached table (Table GBF1-5), which compares the dimensions of the vessels calling on Texas City in 2000 with a range of large container vessels that are just beginning to enter service. It can be seen that the existing vessels, the largest of which are crude carriers, are comparable in length and beam to the new container carriers. The drafts shown are less because the vessels had to be light-loaded to enter the existing 40-foot channel.

GBF1-6: Modifications have been made in the text to clarify the expected changes in runoff and the effects it might have in Texas City Harbor. In general, the harbor receives runoff from a large amount of impervious cover at industrial facilities, and we would not expect this increment to have a major effect. The text on the expected changes in ballast water has also been expanded. However, no detailed design of stormwater facilities has been developed at this stage in the process, and changes in ballast water operations are unknown. Stormwater regulations and requirements are evolving rapidly at this time. Effort spent in designing to current requirements may prove to be wasted when actual design approval is needed. The purpose of an EIS is to describe environmental impacts so that an informed decision can be made on the project. It should not be a vehicle for addressing design details unless they are critical to the evaluation of environmental impacts. Stormwater regulations and required BMPs should minimize potential impacts associated with site drainage. Also see responses to EPA-72 and TNRCC1-6.

GBF1-7: Section 4.2.10.4 has been revised to document the source of this statement.

GBF1-8 and GBF1-9: See responses to EPA-10 and TPW-13.

TABLE GBF1-5 COMPARISON OF EXISTING VESSEL SIZES WITH CONTAINER VESSELS IN PHASE II

EXISTING VESSELS 1

Percentile	Draft	Length	Beam
	(ft)	(ft)	(ft)
10th	21	408	65
50th	28	659	105
90th	38	810	138
100th	40	935	160

CONTAINER VESSELS IN PHASE II

TEU Class	DWT (metric tons)	Fully loaded draft (ft)	Length (ft)	Beam (ft)
4000/4500	58.000	43.6	905	124
4500/5000	65,000	44.3	933	128
5000/5500	66,000	42.7	918	131
5500/6000	70,000	44.0	915	131
>6000	92,000	46.3	1056	138

¹ Source: Year 2000 data from Coast Guard VTS

Shoal Point DEIS Comments February 18, 2002 Page 3

In the summer of 2001, a federal state resource interagency group, similar to the Beneficial Uses Group (BUG) advising on the Houston Ship Channel (deepening and widening) Project, provided definitions of goals, objectives, performance standards, monitoring methods, and remedial actions for each proposed Beneficial Use Site in the Shoal Point Container Terminal Project to the applicant's engineering consultant. While it appears that what the group submitted for performance standards, monitoring methods and remedial actions were essentially conveyed in the DEIS, the Goal and Objective they provided for Swan Lake Restoration were not. The group submitted a Goal to "Use new work material to restore Swan Lake to historic (1964) marsh coverage as depicted in 1964 aerial photography," and an objective to "Restore 360 acres of Spartina alterniflora marsh in phase I of the Shoal Point Container facility."

In essence Swan Lake is an excellent site for habitat restoration to 1965 marsh coverage and this needs to be completed in Phase I.

The 38 acres identified as manmade wetlands and open water within DMPA Cell C in 4.2.12, Vegetation, are not considered for mitigation, ostensibly because they are not jurisdictional. Ignoring these wetlands and open waters because they are manmade begs the question of their value as habitat, and ignores the fact that there were likely wetlands at Shoal Point prior to its conversion to a dredge material placement area. Mitigation for these wetlands should be included in the proposed project.

In 4.2.14, Terrestrial Wildlife, the 45 acres of wetlands mitigation proposed in 4.2.13, Section 404/Section 10 Jurisdictional Areas (Wetlands and Open Waters), are noted as also providing mitigation impacts to wildlife species. However, no consideration is given to the potential impacts to brown pelicans, whose nesting and resting areas may be affected by noise, lights and human activity from the project.

The Recreation (4.2.19.2) discussion does not address recreational fishing impacts from the proposed beneficial uses sites, although recreational fishing impacts are mentioned for the Spillman's Island alternative. The areas proposed for beneficial uses sites are currently heavily used by recreational fishermen, those in boats and wade fishers, as well. These areas are easily accessible and conversion to BUS sites will displace many fishermen.

In 4.2.19.3, Aesthetics, no mention is made of the change in view that will result from the 10-foot increase in elevation of dredge material placement areas, PA5 and PA6.

In 4.2.20, Socioeconomics, no consideration is given to the impacts on recreational and commercial fishing.

Section 8. CUMULATIVE EFFECTS

No mention is made of the cumulative effects of deepening the Texas City Channel in terms of its impacts on salinity and circulation, particularly in West Bay, which has already seen salinity increases from the Texas City Dike and the dredging of the Texas City Channel.

GBF1-10: The results of the agency discussions regarding goals and objectives are presented as flow charts in the revised DMMP.

GBF1-11: There is insufficient new work material available to complete Swan Lake marsh restoration in Phase I. The response to EPA-10 provides more detail on this issue. Also see response to TPW-13.

GBF1-10 GBF1-12: DMPA Cell C is still considered an active disposal site and is currently permitted as such. It is likely the wetlands present at this site were created by placement of dredged materials in Cell C since its designation as a DMPA. Regardless, under the current permit, that location could be used for dredged material placement at any time, thus potentially impacting the wetlands. If

wetlands were present at the site during the DMPA planning process, the USACE was responsible for ensuring compliance with the regulations that were in place at that time. For these reasons, potential impacts to wetlands in Cell C from the proposed project are not addressed in the mitigation plans.

GBF1-12 GBF1-13: There are no known nesting brown pelicans at Shoal Point. The 45 acres of wetland mitigation would also serve as mitigation for any bird resting

GBF1-13

GBF1-14

GBF1-15

GBF1-16

GBF1-17

areas affected by the proposed project.

In response to FWS2-4, Section 4.2.14 has been amended to address nesting migratory birds.

GBF1-14: Section 4.2.19.3 has been revised to recognize the conversion of bay bottom that may be used for recreational fishing to Beneficial Use sites. The sites near Shoal Point are too deep to be wade fishing sites, with current depths of 7 or more feet. The Beneficial Use sites would serve as confined dredged material containment areas as per the DMMP. After these areas have reached a predetermined target elevation, the areas would be contoured, planted and shaped to form intertidal habitat. Creation of this habitat would enhance both the recreational and commercial fishery in the area. The Beneficial Use site at Pelican Island would create habitat and enhance both the recreational and commercial fishery. As indicated in Section 4.2.19.2, a Beneficial Use site originally proposed between Dollar Point and the Texas City Dike was eliminated from project plans as a result of public concerns regarding impacts on recreational fishing in this area.

GBF1-15: Currently, PA5 and PA6 are permitted as active DMPA sites. The increase in elevation of PA5 and PA6 by 10 feet, as proposed in the Shoal Point

project, would have a similar visual impact as what would be expected should the current use of Shoal Point as a DMPA continue.

GBF1-16: The commercial and recreational navigation sections have been modified to reflect effects on commercial and recreational fishing. Also see responses to EPA-25 and EPA-64.

GBF1-17: Information was added to Section 4.8.8 to recognize potential cumulative effects of channel deepening.

Shoal Point DEIS Comments February 18, 2002 Page 4

Appendix B DREDGE MATERIAL MANAGEMENT PLAN (DRAFT REPORT), SHOAL POINT CONTAINER TERMINAL, BERGER/ABAM ENGINEERS, INC.

No unit of measure is provided on the scale for the drawings in Figure 1, Vicinity Map, and Figure 2, Dredged Material Placement Plan (DMMP).

In 2., Design Guidelines, the restriction of a 2.5-mile radius on dredge material transport is unreasonably short. The Houston Ship Channel deepening and widening project has effectively used a greater distance.

In Drawing BOR-1, only one boring location is sited within the proposed berthing area. Without sufficient soils information in this area, it is impossible to determine how the capital grade material from this area might best be used. If location No. FS-4, just inside the berthing area, is any indication, there may be sufficient material to provide additional beach nourishment on the north side of the Texas City Dike.

The conversion of the majority of Swan Lake to marsh is an unacceptable use of the dredge material.

Finally, no evidence is given in the DMMP of financial assurances for completion of the beneficial uses, nor of their protection, in the form of conservation easements, to ensure their maintenance into perpetuity.

GBF 1-18: The drawings have been revised to indicate that the unit of measure is feet.

GBF1-19: The 2.5 mile radius optimizes the use of capital grade material for the construction of levees. Ultimately, if material is pumped any farther, the material loses its cohesiveness and shear strength and as a result is treated as maintenance material (slurry).

GBF1-20: The borings within Shoal Point and within the proposed berthing area are indicative of the soils that can be expected to be encountered throughout this area.

GBF1-21: Comment noted. State and Federal agencies have been included in plans to restore Swan Lake to its approximate condition before subsidence occurred (i.e., pre-1960's). The agencies are supportive of the restoration efforts. As noted by the TNRCC on page 2 of their comment letter dated February 28, 2002, the applicant has been coordinating with agencies and other interest groups regarding proposed plans for restoring habitat in Swan Lake.

GBF1-22: State and Federal Natural Resource Trustees are currently working with TNRCC in efforts to restore a portion of Swan Lake to its original shallow, intertidal embayment habitat. As currently proposed, the Shoal Point Container Terminal project would supply the material needed for that 95-acre project. The remainder of the dredged material would be used for the 45-acre mitigation project associated with the proposed container terminal or would be used to create BUS sites, which would be under the direction of the USACE.

See responses to FWS1-3 and 1-4.

GBF1-18

GBF1-19

GBF1-20

GBF1-21

GBF1-22



JAN 29 2002

PROPOSED SHOAL POINT CONTAINER TERMINAL IN TEXAS CITY POSITION STATEMENT of the GALVESTON BAY FOUNDATION Updated December 2001

The Galveston Bay Foundation (GBF), founded in 1987, has a mission to preserve, protect, and enhance the natural resources of the Galveston Bay estuarine system and its tributaries for its present users and for posterity, through advocacy, conservation, education, and research. Its board and membership are composed of the diverse users of the Galveston Bay system, including recreational and commercial fishermen, industrial users, environmentalists, and recreational boaters and commercial navigation interests, among others.

GBF has been, and continues to be, a supporter of the concept of sustainable development for Galveston Bay. It is possible to have a healthy, productive bay and continued economic development in the surrounding area. This concept depends on a balanced approach. It also requires regional planning. Perhaps no economic development sphere highlights the need for regional planning more than port development. Regional port planning is a process that includes the early and continued involvement of the diverse sectors of the Galveston Bay community. Neither of the currently proposed container terminal facilities for Galveston Bay have adequately encompassed these concepts.

For the proposed Shoal Point facility, GBF's primary concerns continue to focus on the health and productivity of the Bay ecosystem, and in particular on salinity impacts, water quality impacts, wetlands impacts and mitigation, and dredge material plans. The information available at this time leaves several outstanding areas of continuing concern. In the absence of a plan that appropriately addresses these concerns, GBF opposes the development of the Shoal Point facility. Among these concerns are the following:

- GBF continues to oppose the design of any proposed port infrastructure to anything deeper
 than forty-five feet. While the Texas City Channel has been authorized to 50 feet, the
 evaluation for this authorization is more than a decade old, does not cover the channel
 widening that would be required for the proposed facility, and needs a complete reevaluation and new Environmental Impact Statement. This evaluation should include the
 latest in hydrodynamic and circulation modeling to evaluate salinity impacts from a deeper
 and wider channel
- 2. GBF is concerned that the wetlands impacts associated with the Shoal Port facility have not been sufficiently minimized and appropriately mitigated. These wetlands impacts include intertidal fringing wetlands along Shoal Point and wetlands along the proposed access road. These wetlands provide significant benefits to the Galveston Bay system, in terms of fisheries productivity and water quality in particular.

GBF2-1: As described in Section 2.4.2.2 of the DEIS, the applicant proposes to deepen the Texas City Channel to –45 feet MLT as part of this project. Deepening of the channel to –50 feet MLT is not proposed as part of this project. Should another entity choose to pursue further deepening of the channel, it would be outside the scope of this document.

GBF2-2: All existing wetlands within the footprint of the proposed project were investigated and are addressed in Appendix A of the DEIS. Existing intertidal wetlands on the edge of Shoal Point would be destroyed by the construction of the Shoal Point alternative. However, wetlands (in particular the nekton and benthic organisms) in other areas of West Bay would not be affected. Mitigation is proposed for affected wetlands at Shoal Point. As described in the DMMP (Appendix B), Beneficial Use sites (BUS) would allow for the creation of approximately 1,353 acres of intertidal habitat, including 363 acres at Swan Lake and 99 acres at Pelican Island. With the creation of the Beneficial Use sites, habitat would be created for use as a nursery area and the benthic organisms are expected to colonize the area and provide food for many marine species. See responses to FWS1-1 and FWS1-2 regarding minimization of wetland impacts from the access road.

GBF2-1

GBF2-2

Update of GBF Position on Proposed Shoal Point Terminal

December 2001

Page 2

The beneficial uses and mitigation plans for the facility are sited in or near areas of significant fishing use, and appear to more closely resemble filling of the Bay than restoring wetlands habitat. The plans so far fail to provide evidence of financial assurances for their completion, nor protection, in the form of conservation easements, to ensure their maintenance into perpetuity.

4. The proposed facility and its new access would result in significant new nonpoint source water pollution conveyed directly to the Bay. The design must incorporate collection and treatment of the polluted run-off from the site and its new access routes.

The alternatives analysis for the facility needs to include a detailed evaluation of the feasibility of constructing the facility on dredge material for each phase of the project.

 While initial actions on the part of Texas City demonstrated a willingness to bring project concepts forward to the community, there has been much less broad-based community involvement as the project has gone into the more detailed planning phases.

It is imperative that any proposed port project be designed to minimize environmental impacts to the Galveston Bay system and that those impacts be thoroughly analyzed. GBF looks forward to receiving and reviewing the Draft Environmental Impact Statement (DEIS) for the Shoal Point project. Although GBF will reserve its full comment about Shoal Point until after it has reviewed the DEIS, it is GBF's position that the presently proposed Shoal Point project will have an unacceptable impact on the Bay and is therefore not in the best long term interest of the Bay. GBF calls upon both the project sponsors and the Corps to continue to reevaluate whether the proposed project is truly in the best interest of the Bay and all its stakeholders.

GBF2-3: See responses to GBF1-14 and JK-4. As indicated in Section 4.2.13 of the DEIS, prior to historical land subsidence, Swan Lake was an estuarine shoreline marsh. On page 2 of the TNRCC comment letter dated February 28, 2002 (TNRCC1), it is noted that, "..significant ground subsidence over the past 50 years has changed Swan Lake from what was once a shallow, intertidal embayment to a predominantly open water system." The FWS and TNRCC, as well as other agencies, consider the proposed mitigation in Swan Lake a "restoration project". Also see response to FWS1-8.

GBF2-4: See responses to EPA-72 and TNRCC1-6.

GBF2-5: Construction of each phase of the facility must take place on fill that is made of constructible material. Only new work material is suitable for this purpose; maintenance material is finer grained and would not support construction of the facility. For these reasons, materials used from the initial dredging activities must be used as fill for proposed construction areas for all phases.

GBF2-6: Comment noted. Public meetings were held October 3, 2000, February 27, 2001, April 24, 2001, May 16, 2001, and January 29, 2002. Section 6.0 of the DEIS provides detailed information regarding coordination and consultation associated with the preparation of the DEIS.

GBF2-7: Comment noted.

GBF2-3

GBF2-4

GBF2-5

GBF2-6

GBF2-7

City of LaMarqueTx

nard Torres

Set were also on La Manage.

CLM-1

CLM-2

MAYOR - Dennis Rygaard
MAYOR PRO-TEM - Danny Ray Phillips
COUNCIL MEMBERS - Larry Crow, Sr., James Osteen, Richard Torres
CITY MANAGER - Carol L. McLemore

February 14, 2002

U. S. Army Corps of Engineers Galveston District P. O. Box 1229 Galveston, Texas 77553-1229

Attn: Sharon Tirpak

The La Marque City Council unanimously passed the attached resolution at its regular meeting of February 11, 2002. We are forwarding it for your consideration.

The City of La Marque City Council strongly recommends that the Corps withholds the permit for the proposed Shoal Point container terminal until such time as an alternate route for the truck traffic is established, funded and placed on the schedule for construction by the Texas Department of Transportation.

We feel that the traffic route as proposed will create a great detriment for the citizens of La Marque and the surrounding areas by creating great problems of noise, pollution, traffic safety and access.

Thank you for your consideration in this matter. If you should have any questions, please do not hesitate to contact me.

Sincerely

Dennis I

1111 BAYOU · LA MARQUE, TEXAS 77568-4299

Administration 938-9202 · Public Works 938-9280 · Police 938-9269 · Fire 938-9260 · Judicial 938-9245 · Inspection 938-9204

CLM-1: Comment noted. See response to VBV-1.

CLM-2: Comment noted. See responses to VBV-4 and EPA-33.

RESOLUTION NUMBER 933

A RESOLUTION BY THE CITY OF LA MARQUE, TEXAS, CITY COUNCIL SUPPORTING AND ENCOURAGING THE DEVELOPMENT AND IMPLEMENTATION OF AN ALTERNATE ROUTE FOR THE TRUCK TRAFFIC FOR THE PROPOSED CONTAINER TERMINAL TO BE LOCATED AT SHOAL POINT BEFORE A PERMIT IS ISSUED FOR THE TERMINAL

WHEREAS, the City of Texas City has worked with a private developer to develop a container terminal at Shoal Point in Texas City; and

WHEREAS, the City of La Marque supports the development of the proposed container terminal:

WHEREAS, the United States Army Corps of Engineers has prepared a draft environmental impact statement for the proposed container terminal which shows that the frontage road at the Omega Bay Subdivision on I-45, as well as the intersection of I-45, Highway 6 and Highway 146 will be greatly impacted by additional truck traffic created by the development of the container terminal; and

WHEREAS, the increased truck traffic will create noise, pollution, traffic safety and access problems for not only the residents of Omega Bay, but for the traffic at the aforementioned highway intersections; and

WHEREAS, the City of La Marque City Council does not consider FM 519 an acceptable alternate route for the truck traffic because it is a highly populated area with residences and businesses which would also create noise, pollution, traffic safety and access problems for all the citizens of La Marque.

NOW, THEREFORE, WE, THE CITY COUNCIL OF THE CITY OF LA MARQUE, TEXAS DO HEREBY ENCOURAGE AND SUPPORT

- The Texas Department of Transportation to develop an alternate route for the truck traffic for the proposed container terminal, preferably at Exit 9 Frontage Road that could be routed along a road to be developed along the existing railroad tracks or an overpass that would go over I-45 without exiting onto the frontage road, and
- The U. S. Army Corps of Engineers to withhold any permits for the development of the container terminal until such time as the alternate route is developed, funded and placed on the Texas Department of Transportation construction schedule.

Passed and adopted this the 11th day of February, 2002

City Clerk

ATTEST:

FEB 19 2002



Sharon Manzella Tirpak Regulatory Branch, CESWG-PE-RE U. S. Army Corps of Engineers **Galveston District** P. O. Box 1229 Galveston, Texas 77553-1229

Re Proposed Shoal Point Container Terminal on Galveston Bay

Dear Mrs. Tirpak and Reviewers at the Corps of Engineers:

To date, SCENIC GALVESTON (SG) has spoken at a Scoping Meeting in October 2000, at other public gatherings in 2001 and again recently in Texas City at the January 2002 public hearing. We are one of the major stakeholders in landholdings close by to this proposed facility, and our wetland preserve lands are dependent upon the environmental health and well-being of Galveston Bay and adjacent Virginia Point. To this date, our questions have not been addressed to our satisfaction in the Draft Environmental Impact Statement.

We have presented our concerns on a number of issues both verbally and by letter presentation to the USACE about the Draft Environmental Impact Statement and the deficiencies in the study of this proposed facility. SCENIC GALVESTON does not believe the container terminal should be permitted until --and only then if-- the inherent, unstudied negative impacts are substantially and fully evaluated with viable and equitable solutions presented to stakeholders, residents, and public review.

SG's requests an amplified, re-evaluated and new DEIS before permit is given. Our concerns follow:

 Foremost, no facilities of this magnitude should be permitted or constructed any where on Galveston Bay until complete three-dimensional hydrodynamic modeling studies of the Bay are scientifically performed and studied to evaluate cumulative long-term impacts such as salinity intrusion through the current fortyfive foot channel and/or any proposed deepening of shipping channels. SG questions the consequences of additional spoil dredge disposal restricting water circulation and producing water contamination, particularly along the Shoal Point site, along the Intercoastal Waterway to West Bay, backside of Pelican Island, and the northwestern shorelines of Galveston Bay. Existing intertidal wetlands on the edge of Shoal Point, Virginia Point, the Intercoastal Waterway and West Galveston Bay should be evaluated for damaging impacts by this facility to

SGI1-1

SGI1-2

SGI1-3



An Affiliate of Scenic America, Inc.

SGI1-1: The standard NEPA review process will be followed as described in Section 6.4 of the DEIS.

SGI1-2: Section 4.2.10.6 has been added to address circulation and salinity effects.

SGI1-3: See response to GBF2-2.

J-90

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beneficial marine nursery productivity, water quality, wildlife, bird, and plant life.

- Expanded truck traffic numbers, evacuation patterns, and routing onto Interstate 45 have not been planned or analyzed properly. A new DEIS evaluation is requested studying the negative impacts discovered on traffic, noise, and non-point source water pollution affecting Bayou Vista residents, Highland Bayou-Jones Bay, the John M. O' Quinn I-45 Estuarial Comidor (for which SCENIC GALVESTON shares a Conservation Easement with U.S. Fish & Wildlife) and for the contiguous 1,489 acres of Virginia Point soon-to-be acquired to conserve habitat for endangered, threatened and high priority species inhabiting the large mass of undisturbed coastal wetlands, coastal prairies, paten meadows and other Bay fringe edges on Virginia Point near to the proposed container facility.
- Additional air pollution which this facility will produce needs study for an already highest lack of attainment of air quality in the Houston-Texas City metroplex region.
- Plans for the Shoal Point Container Terminal, its future phases, and the
 contemplated access routes must reveal the impacts-- which the DEIS currently
 does not do-- of new significant nonpoint source water pollution running into
 adjacent Swan Lake, Galveston Bay, and other valuable nearby wetlands. What
 are the future impacts of this container facility development and its phased
 expansion atop spoil disposal containment cells so near critically sensitive water
 bodies and wetlands dependent upon tidal activity to and from the Bay?

SCENIC GALVESTON has other issues, but these are the continuing plaguing questions that concern our Board and our organization. Thank you for your efforts to sort out this complex proposal and the long-term cumulative adverse impacts it possibly will bring to our region in the future.

Sincerely yours,

Evangeline L. Whorton Chairman

SG1-4: Comment noted. See responses to VBV-1, VBV-4, EPA-33, and EPA-72.

SGI1-5: As discussed in Section 4.8.9 of the DEIS, the TNRCC has the responsibility for developing a plan for attaining the air quality standard in the HGA. This plan, which was submitted to and approved by the EPA, is called the State Implementation Plan (SIP). The SIP describes how the area will reach attainment of the air quality standard for ozone. The SIP sets emissions budgets for point sources such as power plants and manufacturers, area wide sources such as dry cleaners and paint shops, off-road mobile sources such as boats and lawn mowers, and on-road sources such as cars, trucks, and motorcycles. SIP revisions adopted by the TNRCC on December 6, 2000, for the HGA, proposed to implement emission controls so as to demonstrate attainment for this area by the year 2007. These emission controls are expected to significantly reduce emissions of ozone precursors and provide acceptable air quality for the region.

The HGA is expected to experience growth in the regional population and economy, resulting in increased traffic and industrial capacity. The network of future roadways and subdivision streets resulting from cumulative effects, in addition to existing and planned industrial facilities, would be expected to contribute to additional and varying amounts of air pollution emissions.

Ambient air quality standards and the SIP set limitations on the levels of certain pollutants. The SIP for the HGA includes enforceable commitments required by the EPA for reducing emissions such that the area will attain the ambient air quality standards. The SIP is a dynamic plan that can be constantly updated to account for changing conditions. New regulations and control strategies resulting from the HGA SIP impose emission control measures affecting various sources of air emissions including stationary sources, on-road mobile sources, non-road mobile sources, and area sources. In addition, reductions are also expected from expansion or improvement of high occupancy vehicle lanes, traffic flow management, park-and-ride lots, public transportation, and rideshare programs. Emissions reductions consider the need to offset a potential increase in emissions due to growth in the region resulting in increased traffic and industrial capacity.

In addition to the control of emissions through the SIP, the TNRCC also has regulations in place to control emissions by an elaborate permitting system that requires the implementation of emissions controls for the construction of new

SGI1-4

SGI1-5

SGI1-6

industrial facilities or modifications. These regulations are designed to provide for growth in a way that will continue attainment of the standards.

This regulatory framework will address air emissions from the proposed project. The TNRCC and EPA are responsible for monitoring and tracking air quality levels and the identification of potential air quality exceedances. Adjustments will be made to the SIP, as appropriate, to achieve and maintain continued attainment of the standards. In addition, within the HGA, industrial, community, and municipal groups are working cooperatively with the regulatory agencies to identify ways to continue to reduce emissions while allowing for growth in the area.

The Houston-Galveston Area Council (H-GAC) staff has determined that the Houston-Galveston Area SIP incorporates transportation-related operating emissions due to projected growth in container traffic. The H-GAC is designated as the Air Quality Planning Agency for the HGA and is responsible for reviewing transportation plans and determining their conformity with the SIP. According to a letter from the H-GAC (see H-GAC letter to USACE in Appendix H-9 of the DEIS), the project is accounted for in the region's currently approved Metropolitan Transportation Plan (MTP) and associated conformity analysis. Vision 2022, the Transportation Policy Council adopted the MTP for the Houston-Galveston Region in April 2000, and the associated conformity analysis was approved by FHWA in May of 2000. The analyses conducted in support of the development of the MTP did include the assumption that a container terminal would be in operation at Shoal Point. As discussed in the letter, the conformity analysis was performed in 1999 and used the latest information concerning the terminal's proposed truck-related operations. Although the current projections for truck activity are more than assumed in the conformity determinations, it is the H-GAC's opinion that the additional truck trips would be unlikely to result in emissions exceeding conformity budgets.

SGI1-6: Section 3.10.2 describes the baseline conditions of existing dredging activities and Section 4.2.10 describes the specific surface water effects of the Shoal Point Container Terminal construction and operation. A characterization of the net changes in habitat produced by the project over time is also included. Also see responses to EPA-72 and TNRCC1-6.



2002 6 2 NAL

28 Colony Park Circle Galveston, Texas 77551

J-93

PROPOSED SHOAL POINT CONTAINER TERMINAL IN TEXAS CITY COMMENTS by SCENIC GALVESTON, Inc., STAKEHOLDER TO THE WEST

I am Evangeline Whorton, Chairman of SCENIC GALVESTON, Inc., a 501-c-3, grass-roots community-based scenic and conservation organization founded in 1992. SCENIC GALVESTON owns 900-wetland acres along Interstate 45 south of the Texas City 'Wye' or Interchange, more than 5+ linear miles of highway frontage, and 2+ miles of Bay shoreline. We speak tonight as a major stakeholder in this important decision of permitting Shoal Point Container Terminal and its effect on Galveston Bay, one of Texas' most important natural resources.

In mid-2001, SCENIC GALVESTON had a productive meeting with Texas City Mayor Garza about our proposed purchase, <u>now funded</u>, for additional coastal habitat eastward on Virginia Point, to expand our preserve and buffer it from ancillary port business development. At that time, we felt that most of our potential objections to the project would be alleviated, and we have been quiet to date as a nearby neighbor of the port.

In principal, we are not opposed to a container terminal at Shoal Point, but the project in actuality **is not that simple**. It appears that most of the wider environmental concerns we have, have not been investigated by the DEIS. The terminal will result in irreversible traffic impacts with the influx of thousands of 18-wheel diesel trucks along and adjacent to the Texas City Interchange, Interstate 45, and Highway 146 juncture at the northern flagship end of our habitat conservation preserve. The number of diesel trucks by 2025 have been calculated to be more than 10,300 per day, and as early as 2005, as many as 2,250 trucks per day. Our fears supposedly will be relieved by promise of TxDot's plans to build a new Texas City Interchange by 2010.



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Well, if that Interchange work ahead is anything like the recent improvements at the 'Wye', we are not charmed. The northern end of SCENIC GALVESTON's preserve lost many hundreds of feet taken by eminent domain for the latest work just completed on the Interchange. Will the 2010 Interchange create fly-overs and clover-leaf elevations above our scenic wetland corridor preserve and over Bayou Vista and Omega Bay residences? How do residents in neighboring communities and ensnarled travelers on the I-45 wait for years for a remedy to a traffic jam caused by Shoal Point?

While we fully recognize the economic importance of the project to our neighbor, Texas City, at this time, it appears that politics and money-driven projects usurping the Bay take precedence in Texas. "Bayport", <u>and</u> the recent Houston Port Authority attempted takeover of Galveston Wharves, <u>and</u> the Shoal Point Container Terminal **seem favored** over the health and welfare of nearby residents, the coastal marshes essential as nursery and habitat for marine and avian species, the well-being of Galveston Bay, air quality, recreational and commercial fishermen, recreational boaters, and other diverse users of the Bay. If we keep placing spoil dredge on every available edge of the Bay shoreline and open coastal acre will water circulation ever be adequate again to produce oysters in West Galveston Bay?

SCENIC GALVESTON has to agree with the Galveston Bay Foundation that the beneficial uses for containment cell spoil disposal and mitigation plans sited in or near areas of significant fishing use appear to more closely resemble <u>filling of the Bay than restoring</u> <u>wetland habitat</u>.

On October 3, 2000 at "Scoping" hearings, SCENIC GALVESTON first addressed concerns about the development of this facility, primarily commenting on truck traffic, increases in air pollution, wetlands impacts, water salinity, non-point source water pollution, and dredge material plans. After reviewing the DEIS, we join other area conservation organizations and citizen groups in still having reservations.

SGI2-1: Impacts resulting from the 2010 interchange project, as proposed by TxDOT, are not included in the scope of this EIS because the interchange is being considered regardless of the approval and implementation of the proposed container facility. TxDOT is responsible for conducting an impacts analysis and presenting potential impacts related to the 2010 interchange during the permitting process for that project.

SGI2-2: Comment noted. See responses to EPA-58, EPA-64, VBV-4, and SGI1-5.

SGI2-3: The area around Shoal Point supports no live oyster reefs. Studies have shown that the Texas City Dike is in part responsible for the low oyster productivity in West Bay. The dike has restricted water circulation and limited larval transport from the main portion of Galveston Bay to West Bay. Creation of Beneficial Use sites should not have a negative impact on oyster populations in West Bay. Conversely, oysters in the entire bay system have shown an increase over the last 20 years despite construction activities that have taken place.

In response to comments, Section 4.2.10.6 has been added to address circulation and salinity effects.

SGI2-4: See response to GBF2-3.

J-94

SGI2-1

SG12-2

SGI2-3

SGI2-4

We were advised January 2001 that SCENIC GALVESTON would be a part of the Comprehensive Dredge Management Plan. SCENIC GALVESTON to date has not been asked to participate in any of these planning sessions. Where our concerns might have been allayed, now they have been heightened.

Over the last 10 years, our volunteer organization has acquired and restored a spectacular marshland gateway to Galveston and set aside an important habitat conservation preserve for endangered, threatened and high priority species living in the marshes between Bayou Vista and the Santa Fe Overpass. Every parcel in the preserve that SCENIC GALVESTON has acquired carries a conservation easement with the U.S. Fish and Wildlife Service, restricting it for non-intrusive public use and parkland for habit conservation. We have restored or constructed 70+ acres of new marsh.

Our organization has worked fervently for the good of citizens, marine, bird and wildlife, raising \$3.6 million to acquire, protect, and restore the **John M. O'Quinn I-45 Estuarial Corridor**. Our group is offended by the lack of follow-through to bring the Shoal Point development into the broad community-based involvement originally promised.

One of SCENIC GALVESTON's agency oversight partners, just yesterday, advised us that facilities of such magnitude placed anywhere in the Bay should not be permitted until three-dimensional hydrodynamic modeling studies of the whole Galveston Bay are performed to evaluate cumulative long-term impacts such as salinity intrusion and dredge spoil disposal to the Bay. Such studies have never been done!

With the DEIS presented, our questions remain unanswered. Thank you.

SG12-5

SGI2-5: Scenic Galveston was invited to participate in, and did attend, the February 27, 2001 stakeholders meeting to discuss the proposed beneficial uses of dredged material from the project.

SGI2-6: Comment noted. Public meetings were held October 3, 2000, February 27, 2001, April 24, 2001, May 16, 2001, and January 29, 2002. Section 6.0 of the DEIS provides detailed information regarding coordination and consultation associated with the preparation of the DEIS.

SGI2-7: Additional studies have been conducted to address potential circulation and salinity effects (Section 4.2.10.6 of the FEIS).

SG12-6

SG12-7



MAYOR Julia H. Browning

City of Shoreacres

JAN 3 1 2002

OI SHOREACRES BOULEVARD SHOREACRES, TEXAS 77571 PHONE (281) 471-2244 FAX (281) 471-8955

"A COMMUNITY OF BEAUTIFUL HOMES ON GALVESTON BAY"
HOME OF THE HOUSTON YACHT CLUB

CITY SECRETARY Shari Tait

January 29, 2002

Sharon Manzella Tirpak Regulatory Branch, CESWG-PE-RE U.S. Army Corps of Engineers P.O. Box 1229 Galveston, Texas 77553-1229

Dear Ms. Manzella:

Attached are the City of Shoreacres' comments on the Draft Environmental Impact Statement for the proposed Shoal Point Container Terminal. We appreciate the opportunity to provide comments on this project.

Sincerely,

Nancy R. Edmonson Acting Mayor

440622/020135

City of Shoreacres Comments on Shoal Point DEIS

- 1. First and most important, the City of Shoreacres opposes the Bayport Alternative in the Shoal Point DEIS. Just as we have actively opposed the Port of Houston's proposed Bayport Container Terminal, we oppose the Bayport Alternative presented in the Shoal Point DEIS. A container terminal and its associated noise, air pollution, traffic, and other environmental problems would significantly degrade the quality of life we enjoy in Shoreacres.
- 2. In Section 3.16 Cultural Resources, the DEIS presents extremely detailed histories of the communities located at or near the alternatives. For example, the 2-page history of Alexander Island includes the taxable value of the island in 1851 and the number of horses and cattle on the island in 1874. The history of the Bayport site, on the other hand, is two sentences long and simply states that the Bayport Industrial District fueled growth in the area. Some of the earliest settlement in the Galveston Bay area occurred near the Bayport site, yet the DEIS ignores this fact. The Bayport site includes the historic Red Bluff community, one of the oldest settlements on Galveston Bay. This community was demolished by the Port of Houston in the early 1970s. In addition, while the section included summary histories of the some of the cities at or near the alternatives, this section did not include histories of the two cities that flank the Bayport site—the Cities of Shoreacres and Seabrook. Proper recognition of the history on and near the Bayport site would reveal the long history of this area as a residential and recreational resource. Implying that its history began as an industrial district biases the Cultural Resources analysis. The FEIS should provide a balanced historical summary.
- 3. The Roadway Traffic Impact Analysis for the Shoal Point alternative is comprehensive and well-done. The Roadway Traffic Impact Analysis for the Bayport Alternative (Section 4.4.2), as well as the rest of the alternatives, was insufficient to draw the conclusion that no significant traffic impacts would result from the Bayport alternative. For example, the intersection analysis did not include the Red Bluff Road/SH 146 and Shoreacres Boulevard/SH 146 intersections. While TxDOT may grade-separate these intersections in the long run, these intersections would be at-grade, signalized intersections when this project is projected to open. In addition, the Shoal Point alternative analysis includes calculations of traffic delays from train crossings, but this analysis is not provided for the other alternatives. The FEIS should provide intersection analyses and train crossing delays for all alternatives.
- 4. In the Land Use/Recreation/Aesthetics section for the Bayport Alternative (Section 4.4.19), the DEIS states that Shoreacres is "already influenced by industrial activity" across the Bayport Channel and thus the adjacent land use change would be "quantitative rather than qualitative". The FEIS should recognize that the industrial uses across the Bayport Channel from Shoreacres are terminal facilities, where products are transferred primarily to and from ships and pipelines. This type of activity, while industrial, is radically different in potential impacts from a container terminal. Also in this section of the report, the DEIS states that SH 146 passes through "largely commercial and industrial areas" and, therefore, the introduction of 10,000 truck trips per day would not represent an incompatible use. The FEIS should recognize that the adjacent land use to SH 146 through Shoreacres is residential, and increased truck traffic does represent an incompatible use.

COS-1: Comment noted.

COS-2: The EIS has been revised to address this comment. Please refer to Section 3.16.2.11.

COS-3: The referenced intersections were addressed in the DEIS (see Table 4.2.2-3). Information regarding railroad crossings has been added to the text for each alternative.

COS-4: The general concept conveyed by the referenced comment stands. The proposed facility is a container facility that would involve the import and export of merchandise containers. This type of activity is consistent with existing industrial activities in the area.

COS-5: The general concept conveyed by the referenced comment stands. Although truck traffic may increase due to the presence of a terminal, the current use of the highway, which includes industrial traffic, would not change.

COS-3

COS-1

COS-2

COS-4

COS-5

5. In Section 4.4.20.3 Community Values, the DEIS states that the City of Pasadena has taken no position on the Bayport location. At the December 12, 2001 public hearing on the proposed Bayport Container Terminal, the Mayor of Pasadena opposed the Bayport site. The FEIS should recognize the public opposition by the City of Pasadena to the Bayport site.

COS-6

COS-7

COS-8

- 6. In Section 4.4.19.2 Recreation, the DEIS states that the Bayport alternative would provide "additional opportunities for recreational ship watching" and yet this "benefit" was not listed for the other alternatives. The FEIS should eliminate this clearly spurious benefit from the Bayport alternative—we already have plenty of ships to watch.
- 7. Table E-1 Inventory of Parks and Recreational Facilities, which is presumably the base data used for the recreation sections of the DEIS, omits three important recreational facilities in the City of Shoreacres. The table should include the Bayfront Park, the Shoreacres Recreation Association's pier and boat ramp, and the Houston Yacht Club. The FEIS should include these facilities in the table as well as ensure that impacts to these facilities are properly addressed in the recreation analysis.

COS-6: Section 4.4.20.3 has been modified to reference the Mayor of Pasadena's comments at the December 12, 2001 public hearing on the Bayport DEIS.

COS-7: The general concept of the statement stands. The Bayport alternative would provide additional opportunities for recreational ship watching in the area, more so than other opportunities because of the orientation of the Bayport Ship Channel. Recreational ship watching was acknowledged for the other alternatives (sections 4.2.19.2, 4.3.19.2, 4.5.19.2, 4.6.19.2, and 4.7.19.2). The level to which recreational boat watching is enjoyed is determined on an individual basis. While some may not find it particularly valuable, others may enjoy it as recreation.

COS-8: The Houston Yacht Club, Bayfront Park, and Shoreacres Recreation Association's pier and boat ramp are not included in Table E-1 because the table was based on information provided by TPWD, which did not include facilities developed after 1987 and may not include all private facilities. The Houston Yacht Club is, however, specifically discussed in Section 4.4.19.2 of the DEIS. In addition, parks present in the Bayport alternative project area are shown on Figure 3.18.2-9.



Houston Regional Group P.O. Box 3021 Houston, Texas 77253-3021 713/895-9309

SC-1

SC-2

SC-3

SC-4

February 15, 2002

U.S. Army Corps of Engineers, Galveston District Attn: Sharon Tirpak P.O. Box 1229 Galveston TX 77553

RE: Proposed Shoal Point Container Terminal

The Houston Regional Group of Lone Star Sierra joins the Galveston Bay Foundation and Scenic Galveston in their objections to the proposed container terminal at Shoal Point. As a trustee of both of these groups, I am especially concerned about any impacts or additional pressure on Scenic Galveston's nearby marsh projects; the DEIS is not sufficient to reassure me.

Houston Sierra agrees with GBF and Scenic Galveston that the issues of wetlands loss, wetlands fill and dredge disposal are not properly addressed. The additional surface transportation needs, no matter how much rerouting is planned, remain a threat to human health and safety both from traffic accidents along highways I-45 and SH 146 and from additional air pollution as a result of this traffic congestion. Nonpoint source pollution into the Bay is not adequately addressed.

The Sierra Club hopes that the Corps will begin to adopt a regional approach when permitting new port projects in Galveston Bay, and in the entire district. If the Corps will look at Bay-wide, indeed Gulf-wide needs, and consider what is best for the entire region, the Corps will not grant this permit. It does not serve the people or the environment of the Galveston District to have port projects scattered all around the Bay, and Shoal Point is not a desirable location for one.

Sincerely,

(Ms.) Page S. Williams Coastal Issues Coordinator 4229 W. Alabama St. Houston TX 77027 SC-1: See response to GBF2-2.

SC-2: An increase in truck traffic volume resulting from the project along the IH 45 southbound frontage road would result in an increase in air emissions along the truck route. These emissions would result primarily from the combustion of the fuel used to run the truck as well as fugitive dust along the roadway. Air emissions from these vehicles would be minimized as a result of air quality regulations being implemented by the TNRCC and the US EPA as part of the TNRCC's State Implementation Plan. These regulations affect vehicle design, fuel consumption, vehicle inspection and maintenance, and cleaner vehicle fuels. Reductions are also expected as a result of highway and intersection improvements, traffic flow management, and use of paved roadways. As described in Section 4.2.2.6 of the DEIS, TxDOT has future plans to widen the IH 45 main lanes and redesign the IH 45, SH 6 and SH 3 interchange. These improvements may take the container traffic over or under IH 45, thereby lessening the container traffic impact on the IH 45 frontage road. Emissions from intersection and roadway improvement projects on public thoroughfares are covered by the transportation conformity process as part of the Houston-Galveston Area Metropolitan Transportation Plan. Also see responses to VBV-1, EPA-6, and EPA-33.

SC-3: See response to TNRCC1-6.

SC-4: Comment noted. The preparation of this NEPA document was triggered by a regulatory response by the USACE to a Section 10 and 404 permit application. The USACE responds to these permit applications as they are submitted and each is addressed separately. At this time, there is no plan for a cumulative approach to these facilities. Cumulative impacts, including the proposed Port of Houston Authority Bayport Container Terminal, are evaluated in Section 4.8 of the DEIS.

[&]quot;When we try to pick out anything by itself, we find it hitched to everything else in the universe." John Muir

APPENDIX J-3

PRIVATE CITIZEN COMMENTS AND RESPONSES

JAN 3

Date: January 22,2002

Co: Sharon Manzella Tirpak
Regulatory Branch, CESWG-PE-RE
U.S. Army Corps of Engineers
P.O. Box 1229
Galveston, TX. 77553-1229

From: Georgia Adams

I would like it to be known that I am a property owner that is very much in support of the Shoal Point Container Terminal in Texas City. But, I am opposed to the route that is proposed for the trucks to use. I have listed below the issues and concerns that I have that would not remain concerns if the Port would build a new road, running roughly adjacent to the flood control levee north of Omega Bay. It would directly link the port and I-45 saving miles of additional driving for the trucks. This route would also totally avoid the impacts to any residential area, including Omega Bay and Bayou Vista.

- · Unnecessary congestion
- · Increase Air pollution
- · Increase noise to unacceptable levels
- Traffic safety for me and my family (18 wheeler accidents = 4X you're DEAD)
- · Toxic materials that could spill when these trucks have an accident
- · Lower property values
- · Emergency access to travel to Mainland Hospital (located on Hwy 3)
- Access to I-45 N to Houston
- · Access to grocery stores, nearest Pharmacy, and any other stores in Texas City

There is a safer, no-impact alternative (the new access road) that needs to be considered This option still DOES NOT even appear in the DEIS, and is not being considered as an option. Even after a meeting that was held on May 16,2001, the sponsors of the port and the Corp's consultants have failed to consider this route.

There is not a person that is going to convince me that these trucks would not impact my ability to enter or exit my neighborhood if they are using Exit 7 as their route to Shoal Point Container Terminal.

Thank you,

Colorgan Adams

Form Letter 1 (FL1): Received from Georgia Adams, Jules Adams, Don Amato, Shirley Amato, Paul Barnes, Tina Barnes, Ronnie Broussard, Betty Buck, James Buck, Roy Centanni, Joanie Cook, Ronnie Cook, Brenda Ferro, Ed Ferro, John Ferro, Lisa Garey, Stacey Garey, Christine Jackson, Paula Johnson, Cindy Kerns, Jack King, Melissa King, Julie Kramr, Audra McCall, Kristie McCall, Mike McCall, Sandy McCall, Tim McCall, Tony McCall, Clarence Melancon, Jr., Irene Melancon, Renee Melancon, Debbie Mills, Chris Morton, DeDe Morton, Joseph Pearson, Sandy Pearson, Deanna Perry, Troy Perry, Lois Proff, Robert Tinnell, Teresa Tinnell.

FL1-1: In response to public comments received from many residents of communities located near Exit 7 on IH 45, public officials representing Galveston County and the cities of Texas City and La Marque have initiated discussions with TxDOT regarding the possibility of developing an alternative route for trucks to use as access between the proposed container terminal at Shoal Point and IH 45. During the public hearing on the Draft EIS for this project, several public officials spoke on this issue, including State Senator Mike Jackson; Mr. Nick Saum, representing State Representative Craig Eiland; Galveston County Judge Jim Yarbrough; City of Texas City Mayor Carlos Garza; and City of La Marque Mayor Dennis Rygaard (see public hearing transcript in Appendix J-4 of this Final EIS). These officials stated their support of an alternate truck route and their plans to discuss the option of an alternative route with TxDOT and to work together to obtain funding for this option. In addition, Galveston County and Texas City representatives and elected officials attended a workshop with TxDOT on 13 February 2002. During the workshop, alternative routes to he proposed container terminal were discussed. The status of TxDOT roadway improvements in the vicinity was also discussed (see meeting minutes in Appendix H-15). Galveston County and City of Texas City representatives also met with a consultant on 26 February 2002 to discuss the needs and components of an alternative route study (see meeting minutes in Appendix H-15). County Judge Jim Yarbrough, the City of Texas City, and the City of La Marque have sent letters to the USACE stating that they have retained a consultant to study the feasibility of, and to identify, an alternative truck route (see letters in Appendix H-15).

FL1-2: See response to VBV-1.

FL1-3: See response to SC-2.

FL1-4: See response to EPA-34 and VBV-4.

FL1-1

FL1-2

FL1-3

FL1-4

FL1-5

FI 1-6

FL1-7

FL1-8

FL1-9

FL1-5: Section 4.2.2.9, Traffic Safety, has been revised to include truck-related accident data and projections of total accidents and fatal truck-related accidents in the Build and No-Build scenarios.

FL1-6: In response to public comments, a hazardous materials transport analysis was conducted for each alternative. Results of the analysis have been added to each section in the FEIS. Please refer to Section 4.2.9.3 regarding the Shoal Point Alternative.

FL1-7: The EIS has been revised to include sections on residential property values (see Section 3.20.10 and Section 4.2.20.8 for the Shoal Point site).

FL1-8: Currently, access to the container facility includes plans to construct an access road off of Loop 197. If trucks were to back up at the entrance to the container facility, it would be on this access road that is approximately 3 miles in length. It is highly unlikely that the backup would extend onto Loop 197 and disrupt the normal flow of traffic. Traffic impact analyses did not indicate a change in the projected level of service from the proposed container facility that would impact emergency vehicle access. As described in the response to VBV-1, impacts to traffic loads would be primarily caused by regional growth and TxDOT is considering highway improvements to accommodate the changes.

FL1-9: See response to FL1-1.

JAN 1 4 2002

January 11, 2002

Dear Mr. Tirpak,

I am a residut of Onega Bays. I believe the proposed Shoal Point Container Terminal is a good thing for Galveston County economy, but I must voice my concern on the trucks passing within a few feel of our subdivision. The number of much a that are estimated to pass on the feeder road by this subdivision will make a traffic nightnesse for the residents here, lower our property values, and also bring a health issue from the reston monohide emitted from so many trucks. I have both rethma and a compromised respiratory system from cancer that is in remission. I moved here to get away from the air sollution in Houston.

Please consider an alternate route that would be a more direct route to the terminal and not be passing our homes.

thank you for your consideration.

Sincerely, Berbara M. Benson 27 N. Sandpiper La Marque, TX 77568 BMB - Barbara M. Benson letter

BMB-1: See responses to VBV-1 and FL1-8.

BMB-2: See response to VBV-1.

BMB-3: See response to SC-2.

BMB-4: See response to comment FL1-1.

BMB-1

BMB-2

BMB-3

BMB-4

JAN 2 2 2002

MHB-1

MHB-2 MHB-3

MHB-4

Sharon Manzella Tirpak Regulatory Branch, CESWG-PE-RE U. S. Army Corps of Engineers P. O. Box 1229 Galveston, Texas 77553-1229

Dear Ms. Tirpak:

It has come to my attention that the DEIS (Shoal Point Container Terminal Draft Environmental Impact Statement) does not include a plan to redirect traffic to the terminal. If the Corps numbers of trucks is anywhere near correct, traffic at the area I have always called the "Texas City Y" will severly impact our entering and leaving the area. In addition, the prospects of hazards and toxic "wrecks" are alarming. Since there are alternatives to leave the Omega Bay and Bayou Vista roads free from this traffic, I wish to state my concerns. I am an older retired person and do not want to have to "fight" traffic every time I leave my home. In addition, there is a definite possibility that our property values will be diminished. As a person on a fixed income, this would be a terrible calamity to befall elderly persons. Please reconsider your proposal and provide a plan to redirect traffic to the proposed terminal.

Thank '	You,
---------	------

Marian H. Brick

388 Ling

Bayou Vista, Texas 77563

MHB - Marian H. Brick letter

MHB-1: See response to FL1-1.

MHB-2: See responses to VBV-1 and FL1-8.

MHB-3: See response to FL1-6.

MHB-4: See response to VBV-1.

To Sharon Manzella Tirpak Regulatory Branch, CESWG-PE-RE U.S. Army Corps of Engineers P.O. Box 1229 Galveston, Texas 77553-1229

RE: U.S. ARMY CORPS of ENGINEERS. Permit Application No. 21979 Issue Date 28 December 2001.

This letter is in response to the invitation by the Corps of Engineers to comment on the Public Interests of persons that would be affected by the outcome of the review.

The concerns regarding the impact on the communities of Bayou Vista and Omega Bay voiced at the Public Workshop and Hearing January 29, 2002 need to be considered, these address many issues including safety, which should the prime concern

The truck traffic causing these concerns could be rerouted to Exit 9 as was suggested.

I support the opportunity being offered to the Texas City area by this project And agree it would be a benefit, but if these concerns are not addressed before the permit is issued .it will be difficult and maybe impossible to correct the problem.

I am one of the people that will be affected and hope you will respond to the voice of the people in this matter. Thank you for your consideration.

Respectfully Yours; Earl Brown Bayou Vista, Texas EB - Earl Brown letter

EB-1: Section 4.2.2.9, Traffic Safety, has been revised to include truck-related accident data and projections of total accidents and fatal truck-related accidents in the Build and No-Build scenarios.

EB-2: See response to FL1-1.

EB-3: Comment noted.

EB-1

EB-2

EB-3

PUBLIC WORKSHOP AND HEARING ON THE DRAFT ENVIRONMENTAL IMPACT STATEMENT FOR THE CITY OF TEXAS CITY'S PROPOSED SHOAL POINT CONTAINER TERMINAL PROJECT

V... 29 2002

JANUARY 29, 2002 · WORKSHOP 5:00 – 6:30 PM; HEARING STARTS AT 7:00 PM

COMMENT FORM

This form is provided for your comments on the Draft Environmental Impact Statement (DEIS) for the City of Texas City's proposed Shoal Point Container Terminal project. Please use the space below, attaching additional pages if necessary. The form may be deposited in the comment box, or mailed to the address provided below. We appreciate your interest in and contributions towards this project.

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Mail your comments by FEBRUARY 18, 2002 to:
146 1178
Sharon Manzella Tirpak Please Print:
Sharon Manzella Tirpak Regulatory Branch, CESWG-PE-RE Your Name Joanie Cook
U.S. Army Corps of Engineers Address 38 N. OMEGA D.R.
P.O. Box 1229 Galveston, Texas 77553-1229 LA MARRIE TX 71568

JC - Joanie Cook letter

JC-1: See responses to VBV-1 and FL1-8.

JC-2: See response to FL1-1.

JC-3: The following responses address the listed issues—SC-2, EPA-34, VBV-4, FL1-5, FL1-6, FL1-7, and FL1-8.

440622/020135

J-105

Sharron Mangelle Tirpak Regulatory Branch, CESWG. PE.RE U.S. Army Curps of Enzineers P. P. Box 1229 Bahuston, TX 77553-1229

From: Jenn M. Acossman 13 N. Osneza Dr. La Manque, TX 77568

Dear Sharon Manzella Tirpak:

I attended the meeting on January 29,2002. I came away with my feelings of displie somewhat deminished. I was heartend by the presentations I heard and the commitments of the Mayors of each city concerned - Buyou Visto, Texas City and La Murque - and the Congressional members - in their attempts to unite in seeking an alternate rout, to Shoal Creek from JH-45. I applaud these Gentlemen, and Mr. Billie Moore, in their consideration of families in Bayou Vista and Omega Bay! and It the 20 plus people who voiced their objections to the proposed routing of trucks. all those in attendance that I discussed the project with were for the project - but against the EXIT 7 eguess and Huy 6. What I heard was "take EXIT 9 to the Terminal Courses, construct a road along terminal. And this is what I heard from the officials, named above, that they agreed to consider as a viable solution to the many problems associated with truck traffic from Exit 7 and Huy 6.

JMC-1 and 2: Comments noted. See response to FL1-1.

JMC-1

-OVER-

The only thing I didn't hear was a time period in which to survey the alternate route, funding and construction. Probably no more time than the dredge out the channel for the terminal port.

Both could be planned so as to be completed at the same time.

JMC-2

Respectfully submitted of due appreciate your time and consideration.

Sincerely, Junto. Commann

January 28, 2002 U.S. Corps of Engineers

To Whom It May Concern:

I write in opposition to the proposed plan for directing trucks off I-45 to the Shoal Point Container Terminal.

We live ½ the week in Houston and ½ the week in Omega Bay. We purchased our Omega Bay home some years ago and enjoy the relative quiet and unhurried life and streets there in our retirement years. We feel that the increase in noise, air pollution, traffic congestion and general "busy-ness" created by the exit off I-45 which you are considering would completely un-do all we have attained in our life here at Omega Bay.

It has been suggested to you and is clear to us that an alternative route is possible and it is that route that we support. A new access road adjacent to the flood control levee north of Omega Bay which would link the post and I-45 seems so logical and workable. Please give this alternative strong consideration as you ponder the Shoal Point project. We feel it will benefit the community in the area impacted and also not lower our property values as we strongly suspect the truck traffic would if you use the original plan.

Sincerely and with high hopes of a revised plan using the alternate route.

Janie C. Dishroon #18 North White Heron LaMarque, TX 77568 409-938-3424 JCD - Janie C. Dishroon letter

JCD-1: See responses to VBV-1, VBV-4, and SC-2.

JCD-2: See response to FL1-1.

JCD-3: See response to FL1-7.

440622/020135

J-108

JCD-1

JCD-2

JCD-3

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PPD - P.P. Dishroon letter

PPD-1: See response to FL1-1 and FL1-5.

PPD-1



TEXAS CITY

January 12, 2002

Colonel Leonard D. Waterworth, District Engineer Corps of Engineers, U.S. Army % Sharon Manzelia Tirpak Regulatory Branch, CESWG-PE-RE U.S. Army Corps of Engineers P.O. Box 1229 Galveston, Texas 77553-1229

Dear Colonel Waterworth:

This letter is in response to the Public Notice, dated December 21, 2001, involving the Draft Environmental Impact Statement for the City of Texas City's Proposed Shoal Point Container Terminal. As former Mayor of the City of Texas City, and as Chairman of the Board of the largest independent community banking group of banks in Galveston County, I have a strong interest in the outcome of your D.E.I.S. and the potential applicant's (City of Texas City) success in working with their partners to construct the Shoal Point Container Terminal. This project was one of the main initiatives of my administration, which occurred from May 1990 to May 2000.

At the beginning of my administration, the City Commission, upon my request, appointed a group of over 100 citizens from throughout our community to prepare a document which resulted in a formal comprehensive Master Plan, dated July of 1992, entitled *Goals 2000*. This study was undertaken with guidance from the University of Texas Urban Development Study Group from Arlington, Texas, and consisted of nine general goals and hundreds of subset goals. One, in particular, which we are addressing today, was the development of the Port of Texas City and the support of a regional planning comprehensive plan involving the ports of Galveston, Texas City, and Houston.

Texas City took the initiative to bring together the ports involved and met with considerable success with the Port of Galveston, but only limited success with the Port of Houston. Houston was willing to cooperate only in certain limited areas, with their predominate concern being able to maintain control, due to their size and existing plans that they were developing for immediate deployment and expansion of their port, particularly in the areas of containerization.



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440622/020135 J-110

CTD - Charles T. Doyle letter

Comments noted.

Colonel Leonard Waterworth January 12, 2002 Page 2

The City of Texas City, in Goals 2000, concluded that it wished to continue to maintain a private port, versus a port-authority-directed operation, as existed in Galveston and in Houston. A study by John Vickerman, with VZM/TranSystem, advised the City of Texas City that Shoal Point would make an outstanding location for a fifty-foot megaport for containerization. Working with John Vickerman and Joe Moseley, Ph.D., of Shiner, Moseley & Associates of Corpus Christi, our Goals 2000, Economic Development, and Foreign Trade Zone committees worked with the City Commission to develop a Request for Proposal involving the development of Shoal Point. Through this initiative, we developed an open process that engaged all who had interest in Galveston Bay, just as we had done in the initial Galveston Bay Area regional planning process, which we had supported and also had our local state representatives introduce as legislation in Austin.

Goals 2000 recognized that Texas City serves as the primary industrial center for the Houston-Galveston Area. In 1991, there were \$2,237,368,710 assessed industrial assets in the City of Texas City, which represented 97.3% of the entire county. In 2001, there were \$2,703,072,760 of assessed value, representing 97.8% of all industrial assets in our county. This increase of \$465.7 million was a 20.8% increase in our City during the past ten years. Industrial assessments represent 65.5% of the assessed values by the Central Appraisal District in Texas City. All of the other cities in Galveston County have just the opposite type of assessed values – i.e., bedroom communities. Bayou Vista is 94.2% single-family; Dickinson, 69.2%; Tiki Island, 88.3%; LaMarque, 55.2%; Galveston County is 50.4%; and the City of Texas City is 17.5% residential. Texas City has eleven of the County's top twelve taxpayers located within its city limits.

As you can see, we have a tremendous impact on the economy of Galveston County, the Houston-Galveston Area, the State of Texas, and worldwide. Our port is the eighth largest port in the United States for shipping petrochemicals and the fourth largest in Texas. We have only a very small area for future expansion; and, therefore, Shoal Point, through the study conducted by TranSystem, published in 1998, was the ideal location for the future location of a containerization terminal.

The vision for the future, which was created by the preparation of *Goals 2000*, was an effort to change the image of Texas City from that of an industrial city to one that offered great opportunities as a place to live, work, and play.

In the early Nineties, we had experienced a very bad situation when Mitsubishi Corporation attempted to bring a copper-producing facility to our area. It was called Texas Copper; and the permitting process was not what one would conclude to be an open process, even though it followed the typical application procedures, as outlined under the law, for the TNRCC, as well as for the Corps of Engineers. Environmentalists were not involved in the planning stages; and it resulted in a tremendous controversy, ultimately killing the project due to lengthy delays and threatened lawsuits – much as the situation has occurred with the expansion of the Houston port.

Since this project ended on my watch as Mayor, we called together all the environmentalists, industrialists, and people with economic interests to a public gathering at the College of the Mainland to discover, through a seminar and open-meeting process, what went wrong with Texas Copper and how we could prevent it in the future. The private-public partnerships that occurred during my administration, from 1990 to 2000, primarily were an outgrowth of these groups working together on air quality and protecting our environment

Colonel Leonard Waterworth January 12, 2002 Page 3

and marine life through well-planned dredge-material management and the creation of habitats throughout our community.

I personally, since the days of being a Boy Scout and, more recently, as President of the Boy Scouts of the Bay Area, have worked on environmental projects of all types. I have been a longtime member of the Sports Conservationists of Texas, Ducks Unlimited, Sierra Club, Audubon Society, the Texas Nature Conservancy, and the Nature Conservancy of the U.S., as well as the Galveston Bay Foundation. One of my companies was the first to donate wetlands to Scenic Galveston as a part of the I-45 Corridor Project.

Texas City and its citizens have a most impressive record of supporting environmental projects, all of which were a part of the *Goals 2000* process, which had as its mission to preserve, protect, and enhance the natural resources of the Texas City and Galveston Bay Area. We changed our City's logo from an industrial logo to a rainbow design. No other city in Texas, and perhaps the U.S., can match the City of Texas City's record in conservation of our natural resources during the past ten years; and this was part of why we were a finalist in the All-America City competition in 1995 and 1996, and finally named one of the ten best cities in the United States in 1997, after being a finalist the previous two years.

One of the first steps, following Goals 2000, was to embark on a bond issue, which passed by over 87%, to completely rebuild our wastewater-treatment plant and to effectively contain our wastewater-treatment system through the remedial work of our collection system, which eliminated infiltration and runoff of pollution into the Bay. The second step was to build what we call our Biosphere I Recycling Center, modeled after Biosphere II by the Bass Brothers in Tucson, Arizona. This is a completely cooperative program with our citizens and has resulted in being one of the most efficient and effective award-winning recycling centers in the Houston-Galveston Area.

In addition to the first two projects, we enlarged our parks adjacent to the Bay and worked with the Texas Parks & Recreation Department, as well as the Texas Nature Conservancy, to increase protected habitats and natural land areas by over 2,000 acres within our city limits. We created the Attwater Prairie Chicken Preserve with the Nature Conservancy, and we created the Thomas S. Mackey Nature Center, honoring the Eagle Scouts of the Boy Scouts and the Golden Scouts of the Girl Scouts of America. Ms. Trudy Belz created one of the finest butterfly and hummingbird parks in our state inside the Thomas S. Mackey Preserve.

Another project of Goals 2000 was entitled "Root Texas City", where we encouraged the planting of trees throughout our city and conducted a joint project with the Texas Department of Transportation to enhance nine of the gateway entrances into Texas City through the planting of trees and shrubs at each of these entrances. We also worked with TxDOT to create and enhance the Texas City Wye near the communities of Bayou Vista and Omega Bay. Texas City guaranteed the local funding, as well as the maintenance, in the earlier stages of the project, when no other City would do so – even when the area impacted was outside the city limits of Texas City.

Texas City has been on the forefront of cleaning up Superfund Sites – particularly Tex Tin, which was built by the government in 1941 as a part of the World War II effort for the production of tin in the Northern Hemisphere. It was the only such facility in existence at the time. Thus, you can see by this litany of accomplishments during the last ten years that the Applicant, the City of Texas City, has as its highest

priority the preservation, protection, and enhancement of the natural resources of the Galveston Bay Area; and its record speaks for itself.

The expansion of the Port of Texas City and the development of the Shoal Point International Terminal has great importance to the future of our State and our Nation. We live in a time when our world markets are in transition and the economic leadership of our Nation is at a turning point. We have the opportunity to continue to progress in our ability to move goods and services throughout the world by embracing technology and the expansion of the Texas City Port. Through our open process here in Texas City and our professional and methodical approach to requesting proposals from the world's leading port operators, we were able to choose an excellent partner in Stevedoring Services of America and Americana Shipping. We appreciate your staff and those of the many environmental interests that participated in the preparation of the Draft Environmental Impact Statement for the permit application by the City of Texas City. We commend you for your efforts, and we strongly urge you to approve the Draft and grant the permit in an expeditious manner, so that work might begin at the earliest date possible on a new world-class facility for the Texas City-Galveston-Houston Area.

Sincerely yours,

Charles T. Doyle Chairman

CTD:csl

cc: Texas Natural Resource Conservation Commission 401 Coordinator, MSC-150 P.O. Box 13087 Austin, Texas 78711-3085

PUBLIC WORKSHOP AND HEARING ON THE DRAFT ENVIRONMENTAL IMPACT STATEMENT FOR THE CITY OF TEXAS CITY'S PROPOSED SHOAL POINT CONTAINER TERMINAL PROJECT

JAN 29 2002

JANUARY 29, 2002 $^{\circ}$ WORKSHOP 5:00 – 6:30 PM; HEARING STARTS AT 7:00 PM

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Sharon Manzella Tirpak Please Print:	
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U.S. Army Corps of Engineers Address 4701 Black HAWK P.O. Box 1229 Texas C.t. To 77 567	

WTE - W.T. Etheridge letter

WTE-1 - WTE-3: Comments noted.

440622/020135

Galveston, Texas 77553-1229

33 North Omega Drive La Marque, Texas 77568 (409) 933-0123 February 5, 2002

Sharon Manzella Tirpak Regulatory Branch, CESWG-PE-RE U.S. Army Corps of Engineers P.O. Box 1229 Galveston, Texas 77553-1229

Dear Ms. Tirpak,

As a teacher in the Texas City Independent School District, I fully understand the benefits the Shoal Point Terminal will have on the City of Texas City. However, as a resident of Omega Bay, I feel it is at my expense. Please consider the no-impact alternative plan to use exit 9 and build a road along the levee as the route to the terminal as presented by our representatives. This will create a win-win situation for all parties involved. Thank you for your time.

Maney Evans

NE - Nancy Evans letter

NE-1: See response to FL1-1.

33 North Omega Bay La Marque, Texas 77568 (409) 933-0123 February 2, 2002

Sharon Manzella Tirpak Regulatory Branch, CESWG-PE-RE U.S. Army of Corps of Engineers P.O. Box 1229 Galveston, Texas 77553-1229

Dear Madame,

As a concerned resident of Omega Bay, I am worried about the impact that Shoal Point Container Terminal will have on our community. There are health hazards such as vibration, noise, water, and air pollution. Traffic congestion, as well as property degradation factors, is also a major concern.

I live approximately twenty-five yards from the I-45 feeder road. This is a wonderful community with great neighbors, good fishing, and an all American lifestyle. It is projected that 10,000 trucks will pass just yards from my home. The vibration from these trucks and noise associated with them is going to be more than acceptable. As trucks roll by my house bouncing and banging, the inside of my home will shake and rattle. The noise from this will be intolerable. These trucks will downshift which will create even more noise. As these trucks stack up on the feeder road, they will smoke and rumble all the way to the junction of Highway 146. The trucks will belch thick black diesel smoke, as my one-year old child plays in her yard just feet away. I am sure these trucks will carry cargo that no city would allow to be transported through a residential area. Yet, that is exactly what would happen if they exit on Exit 7. As they leak fluids and blast their air horns, it will be a challenge to feel good about my home and the impact this will have on the environment.

I am also very concerned about being able to drive out of my neighborhood and safely turn onto the feeder road. As mentioned, the trucks will stack up on the feeder road and block the left hand lane preventing me from entering I-45 South. This is the entrance ramp to Galveston. Easy access to Galveston is a major reason people live in Omega Bay. In addition to that, I wonder how long it will take just to get under I-45 to the I-45 North entrance ramp. At the current time, there is no delay. As these trucks stack up and funnel to one left turn lane, it will take an eternity to inch along just to get back on the highway.

As all of the above problems begin to add up, we will no doubt be looking for a quieter and more peaceful place to live. With all the problems this terminal will bring, I doubt my property will keep its value. I will lose money on one of the best investments an American citizen can have, his own home. This community will not be worth a "hill of beans," if these trucks are allowed to rumble and vibrate their way past my home.

The Omega Bay Improvement Committee has proposed an excellent alternative to Exit 7. We propose to use Exit 9 and build a new road running adjacent to the flood control levee north of Omega Bay. This route will totally avoid the impact on any

SE - Steve Evans letter

SE-1: See responses to specific issues below.

SE-2: See responses to VBV-4, SC-2, and FL1-6. Residences located along IH 45 that currently experience vibration from traffic on the interstate are expected to experience an increase in this effect with increasing volumes of truck traffic. Vibration levels are largely dependent on roadway surfacing. Maintenance and repairs of the IH 45 roadway surface are the responsibility of TxDOT.

SE-3: As discussed in Section 4.2.2.6 of the DEIS, based on the results of the queue length analysis conducted for the project, Omega Bay residents should not experience truck traffic blocking the IH 45 South entrance ramp or the IH 45 North entrance ramp.

SE-4: See response to FL1-7.

SE-5: See response to FL1-1.

SE-2

SE-1

SE-3

SE-4

SE-5

440622/020135

J-116

residential area including Bayou Vista. This "No-Impact" alternative is good for our community and for the wetlands that surround us.

In closing, I hope you consider all of the hazards, pollution concerns, traffic congestion, and property degradation factors that will impact our way of life in Omega Bay. We have proposed a "No-Impact" alternative that could create a new taxing corridor for the city of La Marque. Please help us save our wonderful community of Omega Bay.

Sincerely,

Steve Land

SE-6: Comment noted.

SE-6

J-117

1-23-02

Subject: Container Station (Texas City)
Concern:Traffic congestion

Mrs.Sharon Manzella Tirpak Regulatory Branch, CESWG-PE-RE U.S.Army Corps of Engineers

Dear Mrs. Tirpak:

I'm writting to express my concern for the unnecessary traffic congestion that the proyected container station will generate about the communities of Omega Bay and Bayou Vista.

It is simply not enough room on these roads, for so many of these large trucks and the residents of these communities. The exit to get into interestate 45 north and leading toward Texas City will be shut like a cork in the bottle. In case of an emergency, this situation can lead to real bad consequences. The noise level produce by so many trucks conveying in this small section of the road (about 3 trucks per minute) in front of Omega Bay homes facing this particular road, will be intolerable. If toxic material is transported in those large carriers and an accident occurs, which could easily happen with such a heavy traffic, we'll have a catastrophic situation of great proportion..

Put all of this problems together that can be caused by such traffic congestion, and all the residents of Omega Bay and Bayou Vista will see their property value drop considerably.

All this can be avoided if all the parties involved, including the Army Corps of Engineering, considers the proposed safer new access road, which will bypass concentration of people such as the residents of Omega Bay and Bayou Vista. This proposal has been denied by all responsible parties and had refused to included in the draft for future consideration. It is imperative that the Army Corps of Eng. help the people of these communities and advise the responsible parties to include in their plans, the proposed, safer new access road. Your help will save future litigation.

Sincerely,

Mario Jeanardeas Bayou Vita resident

135 Tarpon

:: The Honorable Craig Eiland 225 FM 517 West-Suite 100 Dickinson, Tx 77539

:: The Honorable Mike Jackson 1109 Fairmont Pasadena, Tx 77504

MF - Mario Fernandez letter

MF-1: See responses to SE-3, VBV-4, and FL1-6.

MF-2: See response to FL1-7.

MF-3: See response to FL1-1.

MF-1

MF-2

MF-3

440622/020135

PUBLIC WORKSHOP AND HEARING ON THE DRAFT ENVIRONMENTAL IMPACT STATEMENT FOR THE CITY OF TEXAS CITY'S PROPOSED SHOAL POINT CONTAINER TERMINAL PROJECT

UAA 2 9 2002

JANUARY 29, 2002 . WORKSHOP 5:00 – 6:30 PM; HEARING STARTS AT 7:00 PM

COMMENT FORM

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Mail your comments by FEBRUARY 18, 2002 to:	
Sharon Manzella Tirpak Please Print:	
Sharon Manzella Tirpak Regulatory Branch, CESWG-PE-RE Your Name Your Name	
U.S. Army Corps of Engineers Address 1253 KEDHSH	
P.O. Box 1229 Jeff 14 17 17 17 163	

TJF - T.J. Folk letter

TJF-1: See response to VBV-1.

TJF-2: See response to comment FL1-1.

Galveston, Texas 77553-1229

PUBLIC WORKSHOP AND HEARING ON THE DRAFT ENVIRONMENTAL IMPACT STATEMENT FOR THE CITY OF TEXAS CITY'S PROPOSED SHOAL POINT CONTAINER TERMINAL PROJECT

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Mail your comments by FEBRUARY 18,	2002 to:	
Sharon Manzella Tirpak Regulatory Branch, CESWG-PE-RE U.S. Army Corps of Engineers P.O. Box 1229 Galveston, Texas 77553-1229	Please Print: Your Name IERES2 + Rogen Name as Address IIR Sailfinh Brynn Dista Tx, 7756 3	u

T&RG - Comment form from Theresa and Roger Garneau.

T&RG-1: See responses to VBV-1, and SE-3.

T&RG-2: See response to FL1-7.

440622/020135

Comments: 7

J-120

January 28, 2002

USACE, Galveston District P.O. Box 1229 Galveston, Texas 77553

Attn. Ms. Sharon Tirpak

Subject: Shoal Point Container Terminal

Ms. Tirpak,

Myself as well as most all my neighbors are **EXTREEMLY CONCERNED** regarding the above referenced project.

Our concerns are for the safety and well being of all who live in, and visit the OMEGA BAY subdivision, and Bayou Vista. Once the traffic begins to pile up at exit #7 of I-45, it will be too late. We have all seen the projected number of trucks which will enter and leave the port on a daily basis, and have been informed that the route proposed is almost right through our neighborhood. In meetings, TX DOT representatives have calculated the impact on traffic and human lives and the numbers are not acceptable.

In addition to personal safety, the noise and air pollution will affect our quality of life. This will in turn, affect the value of our property. This too is unacceptable.

We are not opposed to the facility; we just want the trucks routed a different way.

Please consider this our form of civil disobedience, and our opposition to the proposed truck route.

Regards,

Roge Same

Form Letter 2 (FL2): Comment form from Roger Garneau, Teresa Garneau, M. Jack, Jack C. Mills, Kathy L. Parks, Ken Parks, Lisa Spangler, Tom Spangler, Kenny Wathen, Janese Williams.

FL2-1: Comment Noted.

FL2-2: See responses to FL1-5, VBV-4, and SC-2.

FL2-3: See response to FL1-7.

FL2-4: Comment noted. See response to FL1-1.

440622/020135

J-121

FL2-1

FL2-2

FL2-3

PUBLIC WORKSHOP AND HEARING ON THE DRAFT ENVIRONMENTAL IMPACT STATEMENT FOR THE CITY OF TEXAS CITY'S PROPOSED SHOAL POINT CONTAINER TERMINAL PROJECT

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Comments:
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The City is a second by the second by
Texas City will make enough taxs my to pay to
this oplan.
Mail your comments by FEBRUARY 18, 2002 to:
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Sharon Manzella Tirpak Please Print:
Hegulatory Branch, CESWG-PE-HE Your Name
U.S. Army Corps of Engineers Address # 2 N. St. now-
Galveston, Texas 77553-1229

SH - Sue Hanks letter

SH-1: See responses to VBV-1, FL1-8, VBV-4, and SC-2. Regarding the flooding under the infrastructure and its general condition; the maintenance and repair of the infrastructure is the responsibility of TxDOT. Based on existing conditions, TxDOT is in the process of evaluating plans to improve the intersection.

SH-2: See response to comment FL1-1.

SH-3: Comment noted.

J-122

SH-1

SH-2

SH-3

9 No. Pelican St. LaMarque, TX 77568-6533 January 19, 2002

Ms. Sharon Mangella Tripak Regulatory Branch, CESWG-PE-RE U. S. Army Corps of Engineers P. O. Box 1229 Galveston, TX 77553-1229

Dear Ms. Tripak:

My concern about the Texas City Shoal Point development is the same as it was last year when I wrote the Corps about the matter. The Texas City officials want to see the project done because it will benefit Texas City and they care nothing about our small community of Omega Bay in LaMarque. If you drive south on the I-45 feeder road at Exit 7, you will come to a "Yield" sign at Hwy. 6. If a vehicle is not coming on Hwy. 6 you will probably slow down a little and make your left turn and keep going to Loop 197. If there is traffic coming on Hwy. 6, you will come to a complete stop. Sometimes traffic is light, other times it is heavy. This stop of trucks is what I am concerned about. It will cause the trucks to back up and block the feeder entrance and exit to Omega Bay. This truck traffic is going to be harmful to our health here in Omega Bay, because of noise, air horns, and diesel smoke. If the truck line blocks the entrance to Omega Bay, which I think they will, then this becomes deadly to us at Omega Bay, because in case of an emergency, such as fire, heart attacks and others, it is possible that emergency vehicles, such as ambulances, fire department and police, may not be able to get to Omega Bay if they are coming from LaMarque via I-45, exit 7, and the feeder road.

Knowing this could happen makes me upset, that Texas City politicians and planners would want to do this to us, and don't forget the Corps of Engineers if they approve this project. The developers do not want to come up with the funds needed to build a new road to the Shoal Point. They want the Omega Bay residents to pay, possibly with our lives.

Jose A. Hetnandez

Masaria M. Hernandez

Nasaria M. Hernandez

CC: LaMarque City Council Texas City City Council Bayou Vista City Council

Omega Bay Improvement Committee

J&NH – Jose A. and Nasaria M. Hernandez letter

J&NH-1: See responses to SE-3, VBV-4, SC-2, and FL1-8.

J&NH-1

22 for 2002 Speron Mangella Tipak Regulatory Branch, CESWG-PE-RE
U.S. Army Corp of Engineero
POB 1229

Galveston, TX 77553-1229

It is my understanding that plans for School Print Continue on the order of a thousand the interestion of SHW-60 trucks a day to pass through the interestion to the to the to and I-45. This is tally unacceptable due to and I-45. This is tally unacceptable due to

1. Truffic conquetion on the on + off rungs. GH-2

The processing of communities such as Boyon Vista -and Omiga Boy; of briding sontains in Science Galvertin's estimay and the envision fature happie between Galverton T.

between Galuston Inland and Houston, mensetate recording of this treffic and/or use of rail transportation.

Why has the suggestion for a special access road running roughly adjacent to the flood control live not
surrough surrous consideration?

In it present gles form, the preparal is unocceptable.

Galviston, TX 77550

GH - Gerald E. Hite letter

GH-1: See response to VBV-1.

GH-2: See responses to VBV-4 and SC-2.

GH-3: See response to VBV-1. The possibility of constructing an intermodal facility in association with the proposed project was investigated earlier in the permitting process. Preliminary results indicated that, based on the number of containers that would require rail transportation, existing rail facilities at Barbours Cut and in the Houston area are sufficient to support the additional cargo anticipated to result from the proposed project until need for another facility is justified by growth of the container terminal. It has been determined that this would probably occur during Phase III of the proposed project. Regarding use of an alternate route, see response to FL1-1.

GH-1

GH-3

PUBLIC WORKSHOP AND HEARING ON THE DRAFT ENVIRONMENTAL IMPACT STATEMENT FOR THE CITY OF TEXAS CITY'S PROPOSED SHOAL POINT CONTAINER TERMINAL PROJECT

JAN 29 2002

DH-1

JANUARY 29, 2002 · WORKSHOP 5:00 – 6:30 PM; HEARING STARTS AT 7:00 PM

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Mail your comments by FEBRUARY 18	2002 to:
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Sharon Manzella Tirpak	Please Print:
Regulatory Branch, CESWG-PE-RE	Your Name Lon Holle MAN
U.S. Army Corps of Engineers P.O. Box 1229	Address SOD POMPAND
Galveston, Texas 77553-1229	pr 11 1130

DH – Comment form from Don Holleman

DH-1: See responses to FL1-1, FL1-7, and SE-3.

Sharon Manzella Tripak Regulatory Branch, CESWG-PE-RE US Army Corpos of Engineers P.O. Box 1229 Galveston, TX 77553-1229

J&DH - Joy and Don Holleman letter

J&DH-1: See response to FL1-1.

Dear Ms. Manzella:

As home owners in Bayou Vista we urge you to consider an alternate route for the trucks going to a from the Shoal Point

The present route can have a very negative impact on our health and safety and we implore your organization to consider another alternative.

Joy and Don Holleman 500 Pompano St.

Bayou Vista, TX 77563

J&DH-1

PUBLIC WORKSHOP AND HEARING ON THE DRAFT ENVIRONMENTAL IMPACT STATEMENT FOR THE CITY OF TEXAS CITY'S PROPOSED SHOAL POINT CONTAINER TERMINAL PROJECT



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Mail your comments by FEBRUARY 18,	2002 to:	
Sharon Manzella Tirpak Regulatory Branch, CESWG-PE-RE U.S. Army Corps of Engineers P.O. Box 1229 Galveston, Texas 77553-1229	Please Print: Your Name 50 Y Holle MAN Address 500 BAYOU VIS 79 TX 77563	3

JH - Comment form from Joy Holleman

JH-1: See responses to FL1-5, VBV-4, FL1-8, and FL1-1.

440622/020135

J-127

February 4, 2002

Ms. Sharon Manzella Tirpak Regulatory Branch, CESWG-PE-RE U.S. Army Corps of Engineers P.O. Box 1229 Galveston, Texas 77553-1229

Re: Shoal Point Container Terminal Truck Traffic

Dear Ms. Tirpak,

I am a resident of Omega Bay and have concerns about the proposed Container Terminal. More to the point, the amount of tractor-trailer traffic the terminal will create as proposed by the Corps. I was in attendance of a meeting for the resisdents of Omega Bay and was not at all pleased with the presentation of statistics projected by TX DOT and the Corps. It was very apparent that neither has no idea of what we, the residents of Omega Bay, will have to contend with if the routing of the trucks stands as proposed to us. First let me state that I am in favor of growth and improving our collective communities. I welcome the added tax base the terminal will bring to the community, provided there is one.

The main objection that my neighbors and I have is the trucks that will pass and collect on the I-45 feeder due to their travel via Hwy. 146 to Texas City. As presented to us, there will be approximately 10,585 trucks that will travel into the site by the year 2025. No doubt the noise, air, ground, and water pollution will take its toll on every living thing in the area. An alternate route to the site has been brought up that would minimize this but so far seems to fall on deaf ears. There is a flood control levee north of exit 7 that would provide direct access to the port that would allow for greater expedition for trucks in and out of the site. This would also minimize the impact on all of the communities that have concerns, but more importantly, the environment. Of course, that would mean a road would have to be constructed, but the added cost could be and should be absorbed by those who would use it.

I beseech you to please take into consideration not only our concerns and issues but also those of the whole area that will be affected. Thank you in advance for your time and consideration.

Very sincerely yours,

Al Horcica

14 South Skimmer

La Marque, Texas 77568-6544

Cc: Omega Bay Improvement Committee

AH - Al Horcica letter

AH-1: Comment noted. Section 4.2.21.10 of the DEIS provides a discussion of potential effects of the proposed project on local tax revenues.

AH-2: See responses to VBV-4, SC-2, FL1-6, EPA-41, and EPA-38.

AH-3: See response to FL1-1.

AH-1

AH-2

AH-3

Sharon Manzella Tirpak Regulatory Branch, CESWG-PE-RE U.S. Army Corps of Engineers P.O. Box 1229 Galveston, Texas, 77553-1229 1083 Redfish St. Bayou Vista, TX.77563 January 31, 2002

Dear Ms. Tirpak,

As a resident of Bayou Vista, I am writing to express my deep concern regarding the impact of the Shoal Point Container Terminal on our community and near-by Omega Bay.

The primary concern is traffic pile-ups at the #7 exit of I-45, given the TX DOT projected figures for the number of trucks which will enter and leave the port round the clock. In addition to a horrendous traffic jam, we are also concerned about noise and air pollution. All of these factors will adversely affect our quality of life and our property values, therefore, the proposed truck routing is unacceptable!

If the exit #9 alternate route is developed, terminal traffic will not affect residential neighborhoods. I firmly support this solution and sincerely hope that the Army Corp of Engineers will make it a condition of its approval of the project.

Yours truly,

Mary Humphrey

MH - Identical letters submitted by Mike and Mary Humphrey.

MH-1: See responses to VBV-1 and FL1-8.

MH-2: See responses to VBV-4 and SC-2.

MH-3: See response to FL1-7.

MH-4: See response to FL1-1.

440622/020135

J-129

MH-1

MH-2

MH-3

MH-4

19 N. White Heron LaMarque, Texas 77568

February 8, 2002

Sharon Manzella Tirpak Regulatory Branch, CESWG-PE-RE U.S. Army Corps of Engineers P.O. Box 1229 Galveston, TX 77553-1229

RE: Shoal Point Container Terminal Public Notice #21979

Dear Ms. Tirpak:

I appreciated the opportunity to address the Corps regarding the above referenced project during the public hearing held on January 29, 2002. In this letter, I would like to briefly reiterate my major reservations concerning this project on behalf of the residents that I represent in both Omega Bay and Bayou Vista.

As you know, residents of Omega Bay and Bayou Vista have been extremely concerned about the increased truck traffic that this project will bring to our community. We are concerned that our community will bear the brunt of the negative impacts associated with the construction and operation of the container terminal.

In an attempt to minimize these impacts, we, as a community, identified an alternative traffic route that would avoid traffic impacts to all residential areas. We raised awareness of this opportunity within our community and gained the solid support of numerous local politicians. There is now broad consensus that this alternate truck route should be constructed.

Currently, the project sponsors are relying solely on the Texas Department of Transportation (TxDoT) to supply funding to construct this alternate route. I do not believe that this will guarantee state monies are available for the project. Given the severe budget shortfall that the State of Texas must address in the upcoming legislative session, I believe that TxDoT may have difficulty in securing adequate appropriations for project (especially since it is not currently an officially TxDoT-sponsored project).

The only way to insure that the road will be built is to include it as part of the permitted project. I request that the alternate roadway be included as part of the project footprint in the permit application and that it be evaluated in the final Environmental Impact Statement. Further, to insure that the new road will be built, I think it is incumbent for the project sponsors to commit adequate funding towards it completion (whether that includes total construction costs or partial funding to elevate the project on TxDoT's priority list). Finally, as a condition in the 404 permit, I request that the road be constructed prior to Phase 1 of the project so that it can be utilized by construction traffic as well.

Thank you for the opportunity to submit these comments.

Russell W. Kiesling Vice-President, Galveston Municipal Utility District #12

Vice-President, Galveston Munksipal Utility District #12 Director, Omega Bay Improvement Committee

ce: MUD #12 OBIC

440622/020135 J_1

RWK - Russell W. Kiesling letter

RWK-1: Regarding traffic concerns, see response to comments VBV-1 and

FL1-8. Comment noted.

RWK-2: See response to FL1-1.

RWK-3: Comment noted.

RWK-4: Comments noted.

RWK-1

RWK-2

RWK-3

RWK-4

JAN 29 ZC

Shoal Point International Container Terminal Public Hearing Comments January 29, 2002

My name is Russell Kiesling. I am a Vice-President of Galveston County Municipal Utility District #12 and serve on the Board of Directors of the Omega Bay Improvement Committee. As such, I represent residents from Omega Bay (which is in the City of LaMarque) and the Village of Bayou Vista -- many of whom are here tonight to voice their own concerns. Can I have a show of hands from everyone who lives in Omega Bay and Bayou Vista?

The residents of Omega Bay and Bayou Vista have been greatly concerned about ongoing development activities associated with the Texas City International Container Terminal. As affected citizens, we have attempted to participate in the NEPA process associated with this project. We have provided comments and suggestions during the scoping process for the EIS and we have hosted three meetings within our community to communicate our concerns.

As a community, our major concern with the project has centered on traffic congestion.

Specifically, we feel that Omega Bay and Bayou Vista would sustain severe negative impacts due to the increased truck traffic anticipated during construction and operation of the port. The planned increase in truck traffic expected to use the Interstate 45 Exit 7 would result in dangerous levels of traffic congestion, elevated noise levels, increases in air pollution, and the transport of toxic materials through our residential communities. We believe that these negative impacts will likely result in diminished property values for local homeowners in the communities of Bayou Vista and Omega Bay.

Throughout the public involvement process, we have advocated the construction of a special purpose access road connecting Interstate 45 to the new port terminal. We have suggested on numerous occasions that the project sponsors investigate an alternative route that would utilize Exit 9 and run roughly parallel the flood control levee. This route would not impact a single residence and would make currently undeveloped land accessible for future development. To date, this alternative route has not been seriously investigated by the project sponsors. Instead, the Draft EIS relies solely on TxDOT-funded re-construction of the Texas City Wye as the solution to the traffic congestion created by the terminal.

Those of us who live in Omega and Bayou Vista do not view re-construction of the Texas City Wye as the solution. In fact, we believe it represents a serious problem in and of itself. Thus far, residents of Omega Bay and Bayou Vista have not been involved in any stakeholder meetings with TxDOT regarding reconstruction of the Wye and how that would negatively impact our communities. Our views have not been heard nor considered. The few residents who even know that TxDOT is considering building a major "Beltway 8-style" intersection above our communities learned about those ridiculous plans from this Draft EIS. This is simply not an acceptable solution now or in the future.

In regards to the new access road that we have proposed at the uninhabited Exit 9, we applaud the recent efforts by our local elected officials (Judge Yarbrough, Mayors Garza, Rygaard, and

RWK-5: See responses to VBV-1, FL1-8, VBV-4, SC-2, FL1-6, and EPA-41.

RWK-6: See response to FL1-7.

RWK-7: See response to FL1-1 regarding alternative route. Other comments noted. Any plans TxDOT may have to improve the Texas City Wye are independent of the proposed project and are not included in this permitting process.

RWK-8: Comment noted.

RWK-5

RWK-6

RWK-7

RWK-8

Mims, Councilman Osteen, Aldermen Jackson and Leago, and others). We believe that the consensus they have reached regarding this new access road will benefit all the affected communities with the added benefit of increasing the efficiency of terminal operations. For all those involved, the access road represents a win/win solution to the traffic congestion issue

Having said that, I think its a great start that our elected officials will pass resolutions and write letters in an attempt to secure public money to build this new road. We remain guardedly optimistic that they will succeed. However, we seek specific assurances that this deal will come to fruition. Specifically, we seek assurance that:

- A special access road will be constructed utilizing Exit 9 and roughly paralleling the flood control levee. This would connect IH-45 to the Terminal.
- This road must have the capacity to handle all anticipated truck traffic at ultimate build-out of the port facility.
- Financial assurance that the road will be constructed and maintained must be demonstrated (either with secured TxDOT funding or through contributions from the financial backers of the Port, and/or local partners).
- In addition, as part of a single and discrete project, the access road must be included in the
 permit application and depicted as part of the project footprint in the Environmental Impact
 Statement.
- Finally, the road should be constructed prior to Phase 1 of the project. Ideally, it should be the first thing built so that construction traffic can utilize it as well.

On behalf of the residents of Omega Bay and Bayou Vista, I thank you for your consideration of our concerns.

RWK-9: See response to FL1-1.

RWK-9

GREETINGS:

I Am writing you to voice my objections to the Shoal Point containerport. I am not trying to be mean-spirited but truth Ful.

IF you go out to Exit 7(I45)

AS I Am Sure you have there
is one obvious conclusion on this choice FOR A Route. The people who chose this Route were very very ARROGANT AND OR VERY INCOMPETENT! They RPALLY, REALLY DO NOT CARE. These thous ANDS OF TRUCKS WILL destroy JK-1 OMEGABAY AND BAYOU VISTA.
ALSO the choice of exit vine will provide some relief but ultimately we will be living IN AN INDUSTRIAL Night MARE. JK-2 The people who designed this Route should not have Any JK-3 CREDibility When the DAY is CONSIDERED, I AM AN AUID experienced Fisherman, This project will destroy some excellent Fishing And Shrimping. IF you LOOK North in the Am JK-4 JK - Jim Kirkendall letter

JK-1: Comment noted.

JK-2: Comment noted.

JK-3: Comment noted.

JK-4: The quality of the recreational and commercial fisheries would only be temporarily reduced during dredging operations. This is not a permanent condition; the quality of fishing in the area would steadily improve after dredging is completed. The additional habitat created by the Beneficial Use sites would enhance fisheries in nearby areas. See response to GBF1-14.

The closest live oyster reefs are well south of the project location. Beneficial Use sites were selected to avoid areas of known or potential oyster reefs. Also see response to comment SGI2-3 regarding oyster reefs in the vicinity of the project.

during the summer you will see an Armada of Shrimp boats in Lower galo. Bay, There are also live oyster reets over there, Pumping the dredge in the middle of the bay used to be A NO-NO. The three sites they have selected ARR ALL PRIME WADE Fishing LOCATIONS. CN Sheet 2 OF PROject FRATURES OF the D.E.IS you can see these Locations 'SAND ISLAND has been omitted From the MAP. This is A LARGE ISLAND between ShoALS Point AND I. C. WATERWAY At the News of Polican Island. It is at the opposite side of
It up ter way as Pelican islams.

Asine From being A prime tissing

Spot, scores of brown Pelican

Spot, scores of brown Pelican Chicks Are hatched here! Please confront these people on why this is LAND WAS Omitted Please TAKE A GOST RIDE AND SEE FOR YOUR SELF! ALSO you have more than one

440622/020135

JK-5: The island referred to does not appear on the permit application drawings in Appendix A of Volume II of the DEIS. This was an oversight. However, the island appears on several other figures, including 2.4.3-1, 3.4-1, 3.4-2, 3.7.2-1, 3.9.2-1, 3.18.2-2, 3.18.2.8, 4.2.2-1, 4.2.2-2, and 4.2.18-1 and is referred to as Pelican Spit in the text.

Bird populations that occur within the Shoal Point project area and potential impacts to them are discussed in Section 4.2.14 of the DEIS.

JK-6: No permits have been issued by the USACE for the proposed project. The EIS process must be completed before the USACE makes a decision regarding issuance or denial of the permit.

JK-5

employee stating the PREOGE PERMITS"
have been issues and this is a
done deal. This is disheartening.
Please do not accept this
project.

Sincerely; Jim Kirkenasce Sintimental

694 WARSAW BAYON Vista, TX 77543 phone 409-938-3919

Bryce E. Langley 1069 Redfish St Bayou Vista TX 77563

USACE, Galveston District P.O. Box 1229 Galveston, Texas 77553

Subject: SHOAL POINT CONTAINER TERMINAL

Ms. Tirpak,

My neighbors and I are gravely concerned over the Shoal Point Container Terminal project. We are concerned for the safety and well being of the residents and guests who visit Omega Bay and Bayou Vista. We have been informed that the proposed route will be through the heart of our neighborhood. Based on TXDOT projections, the traffic and pollution will most certainly degrade our quality of life and the value of our property.

We are not opposed to the facility; we just want the trucks rerouted. Please consider this our form of protest and opposition to the proposed truck route.

Respectfully

Bryce E. Langley

BEL - Bryce E. Langley letter

BEL-1: Currently, it is expected that trucks returning to the proposed container terminal facility on southbound IH45 would exit at Exit 7, travel south along the two-lane IH 45 frontage road, and turn east under IH 45 at the intersection of IH 45 and SH 6. Section 4.2.2.9, Traffic Safety, has been revised to include truck-related accident data and projections of total accidents and fatal truck-related accidents in the Build and No-Build scenarios. Also see responses to comments VBV-1, FL1-6, FL-7, and EPA-41.

BEL-1

January 29, 2002

DISCUSSION ON SHOAL POINT CONTAINER TERMINAL

Let me say this, I support the Shoal Point Container Terminal, however I do not believe that one city should cause problems for it's surrounding neighbors. Texas City Mayor Carlos Garza in a local newspaper, Friday, January 25, 2002 stated that the concerns raised by Omega Bay and Bayou Vista residence about increased traffic from the proposed Shoal Point Container Terminal shall be addressed. What comes with the traffic also SJM-1 causes pollution and more noise. Omega Bay and Bayou Vista residence have always had the traffic on its feeder road to Houston and Texas City. These trucks using the above route would not only create more traffic it could also cause damage to the over passes that they travel under on I45. If just one truck should be carrying a load to tall to go under the over passes it would cause a lot of damage. Omega Bay and Bayou Vista residences have always had to endure flooded roads going to Houston and Texas City because of the low area they have to travel. I believe I have an answer to their concerns, an over pass could be built over the northbound traffic traveling to Houston and La Marque as an alternate route for the trucks traveling down I45, just like the over pass that travels off of Hwy 3 and Hwy 146 going north towards Texas City. This over pass could cross over at a 45-degree angle across the old Sunflower trailer park and the end of the Motco land fill and come out on Hwy 146 and Loop 197. This would divert the traffic from the Omega Bay exit. This same over pass could be built wide enough to also handle the northbound traffic out of Texas City and the South end of La Marque and on to Houston. This property could be purchased by the state and if the price of the land is not reasonable, the state could buy it under the Emmett Domain Clause, that gives the person that owns the property the fair market value for their land. While I was on the La Marque City Council it was brought to our attention that there was going to be a Truck Stop in La Marque, between I45 and Hwy 519 to service these trucks, and would supply parts for them if any repairs is needed. This road was to cross the end of the golf course and exit on Hwy 519 by the VFW Hall. La Marque does not need the additional traffic or pollution; we have enough problems with the eighteen wheelers that we now have driving through the city. If Texas City is to gain from this revenue they should bear responsibility for the up keep of the roads and traffic jams. Omega Bay is part of La Marque, they are considered a small bedroom community, like the rest of La Marque, lets keep it that way.

SJM - S.J. "Sonny" Manual letter

SJM-1 and SJM-4: See responses to VBV-4 and SC-2.

SJM-2: Truck traffic routed to and from the terminal would be subject to rules and regulations that limit container sizes, as appropriate. It is highly unlikely that damage would be done to an overpass from an over-sized container. In regards to traffic safety, Section 4.2.2.9, Traffic Safety, has been revised to include truck-related accident data and projections of total accidents and fatal truck-related accidents in the Build and No-Build scenarios.

SJM-3: Comments noted. Improvements and realignments of public roadways are the responsibility of TxDOT. Road improvements and truck servicing facilities are not a part of this project and are not included in the permitting process.

SJM-4: Comments noted. TxDOT is responsible for road maintenance and traffic issues on state highways in the project area.

SJM-3

SJM-2

SJM-4

A truck stop like I mentioned is now in a perfect location on the South end of Hwy 146. Let the City of Texas City buy the old Central Freight Line property and service the trucks there. The La Marque City Council needs to look ahead for this problem in the near future; the citizens do not need or want the additional problems with the trucks. There will be between 2,000 and 2,300 trucks a day traveling to Texas City terminals and back with in a twelve hour period or an average of 191 trucks an hour between the hours of 7:00 a.m. to 7:00 p.m. seven days a week. This would not only hurt La Marque, Omega Bay and Bayou Vista, the traffic jams will kill Galveston's tourist business especially Dickens on the Strand, Marti Gras, Spring break, KAPPA and any other function that Galveston may have. How would the citizens of Texas City like to have these trucks exit Hwy 145 onto Emmett Lowery Expressway and travel through their city to the Shoal Point Terminal?

Thank You,

S.J. "Sonny Manuel S.J. "Sonny" Manuel SJM-5: Comment noted.

SJM-5

SJM-6

SJM-6: Comment noted. As described in Section 4.2.2.2 (Intersection Analysis), modeling indicates that, for the first phase of the project (year 2005), the LOS (level of service) under Build conditions would drop from B to C relative to No-Build conditions at two intersections, the SH 3 at Loop 197 intersection and the SH 146 and El Mar intersection. For Phase II of the project (2015), the LOS is expected to be affected at one additional intersection, FM 519 at SH 146. For Phase III of the project (2025) the LOS is expected to be impacted by the project at one more intersection, the SH 146 at FM 1765 (Table 4.2.2-3). In Section 4.2.2.3 (Main Corridor Analysis), modeling suggests that the change in the LOS is not projected to differ from that of the No-Build conditions in 2015 and very little change is expected for 2025 (Table 4.2.2-4). Traffic generated by the normal growth

of the region is the primary cause of overall reductions in LOS.

Tirpak, Sharon SWG

From: Lalise Whorton Mason [lalise@earthlink.net]

Sent: Monday, February 18, 2002 4:19 PM

To: Sharon Tirpak - USACE

Subject: SHOAL POINT DEIS COMMENT

Sharon Tirpak Regulatory Branch CESWG-PE-RE US Army Corps of Engineers Galveston District PO Box 1229 Galveston, Texas 77553-1229

Re: Proposed Shoal Point Container Terminal on Galveston Bay

Dear Ms. Tirpak:

I serve on the Executive Board of SCENIC GALVESTON, Inc. and on the Executive Committee of the Galveston Bay Foundation. I'm also President of the Board of the Gulf Coast Bird Observatory. Since at least two of those three organizations are already writing you formally, I write you today as an individual.

I share the concerns that both GBF and other organizations will be expressing to you, about deficiencies in the DEIS for the Shoal Point terminal project. I won't herein reiterate arguments --traffic and air quality, nonpoint source runoff, etc-- that I know others will be posing. However, to summarize what I am hearing in the many meetings I have attended about container terminals in general and Shoal Point specifically: in the opinion of all area conservation organizations. neither the DEIS for Shoal Point not that for Bayport go nearly far enough in analyzing what really will happen to Galveston Bay, in the long term, as these big terminals are inserted in this repidly urbanizing, already-stressed portion of the Bay. There has never been a true regional 'sustainable port' alternatives analysis, nor a 3-D hydrodynamic model of cumulative impacts, to inform public response to these big projects. NONE of these projects should receive permits until such studies are done. Your current DEIS / EIS procedure simply isn't adequate to the task, particularly in light of the fact that there's not one, but TWO or more competing port proposals in the works. The thought that both might receive permits is indeed frightening.

LM-1

As Restoration Chairman for SCENIC GALVESTON, my concerns about the DEIS fall into the following specific categories:

First: I restore wetlands for our organization. Wetlands construction is a tough business --we are in the infancy of what we understand about constructing successful --sustainable-- new habitat. An alarming volume of dredge spoil will be generated, not by this project per se, but by the the incremental displacement of already-contracted dredge material away from Shoal Point and into open Bay water impoundments. The fact that private developers, with little public accountability, are at the helm of this very long-term 'beneficial use' project, is worrisome. None of this is addressed well enough in the DEIS.

LM-2

Second: The Swan Lake restoration (mitigation) portion of the project is fine as far as it goes, but apparently the Natural Resources Defense Council agency Trustees already intend a full restoration of Swan Lake as part of another larger penalty assessment project. This, to me, undermines the value of the Swan Lake work that will be required for

LM-3

J - 139

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LM - Lalise Mason letter

LM-1: In response to public comment, additional studies have been conducted on potential impacts to Galveston Bay from the proposed project. The results are presented in Section 4.2.10.6 of the FEIS.

LM-2: All BUS activities will be reviewed and overseen by the USACE. Also see response to FWS1-3 and 1-4.

LM-3: The Swan Lake restoration/ mitigation project is one of seven planned Beneficial Use sites. The estimated total acreage of the Swan Lake site, including the 45-acre mitigation area, is 363 acres. As noted by the TNRCC on page 2 of their comment letter dated February 28, 2002. State and Federal Natural Resource Trustees (Trustees) are, in fact, involved in a restoration program for a portion of Swan Lake. The Trustees' marsh restoration project is planned for approximately 95 acres in Swan Lake, separate from the 45-acre mitigation area for this project. Under the current proposed plan, this project would provide the material needed for the Trustees' restoration program. In addition, the proposed project would provide sufficient material (in Phase II) to complete the restoration of Swan Lake, which would not occur under the Trustees' restoration program. The TNRCC has recognized that new work dredged material has been dedicated to the Trustees' restoration effort during Phase I of the proposed project. As stated in the above-referenced letter, "The agreement to provide Phase I material for the Trustees' marsh restoration project represents the culmination of extensive discussions between the agencies, the applicant, and TCIT representatives."

Shoal Point mitigation. Again, this seems to be a byproduct of the piecemeal approach created by the Corp's current DEIS system. A regional approach to both negative impacts and to mitigation is needed badly.

LM-4

Third: I am concerned about the erosional impacts of increased shipping in the Texas City channel and the effects of increased salinity in the immediate area of Virginia Point if the TC channel is dredged deeper. The east shoreline of Virginia Point is experiencing significant erosion problems already. 50+ feet of shoreline have been lost in the past century. Oysters are yet hanging on off that shoreline, and significant numbers of shorebirds are utilizing the oyster reefs as a food source. If erosion continues, and/or salinity increases, what is the fate of this important habitat resource in Galveston Bay? In addition, in my personal experience, the deeper water immediately off Virginia Point is a haven for wintering diving birds, including Priority and High Priority ducks. How much shipping traffic is too much for these fragile species, especially --again-- if we are looking at not one, but two, or even three container terminals in the Bay? The DEIS simply isn't sufficient.

LM-5

LM-6

Please amplify the DEIS. Please dovetail it explicitly with other port proposals. The public will support a cautious Corps approach to issuing these big permits. The longterm health of our Bay is at stake, and many eyes are watching these projects.

LM-7

Thanks, Sharon and Corps reviewers.

Sincerely,

Lalise Mason 201 Macarthur Street Houston, Texas 77030 713-664-1870 LM-4: See response to SC-4.

LM-5: In response to public comment, additional studies were conducted regarding potential impacts to salinities in Galveston Bay. The results are presented in Section 4.2.10.6 of the FEIS. Also refer to response to comment GBF1-5.

LM-6: Bird populations that occur within the Shoal Point project area and potential impacts to them are discussed in Section 4.2.14 of the DEIS. Comment noted.

LM-7: Comments noted.

January 28, 2002

Sharon Tirpak Regulatory Branch, CESWG-PE-RE U.S. Army Corps of Engineers P.O. Box 1229 Galveston, TX 77553-1229

Dear Ms. Tirpak:

We are asking that you do all possible to change the route of the thousands of trucks that will be going and coming from Shoal Point Terminal from its currently planned route of exiting from I45 South on exit #7 to exit #9. We are residents of Bayou Vista and the environmental, noise and economic impact will be devastating to this area.

Our homes cannot retain their value, the air will be foul and noise will be intolerable to us. The majority of our residents are older, retired persons on a fixed income and the lower values of our homes will be impossible to regain in our lifetime.

Again, we ask that you do whatever you can to help your neighboring communities We understand that exit #9 is an non-residential area and would not be adversely affected by this change. Please give us your support.

Yours truly

Frank and Jerre Massa

86 Tarpon

Bayou Vista, TX 77563

F&JM - Frank and Jerre Massa letter

F&JM-1: See response to FL1-1.

F&JM-2: See responses to FL1-7, SC-2, and VBV-4.

F&JM-3: Comment noted.

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J-141

F&JM-1

F&JM-2

January 28, 2002

Sharon Manzella Tirpak Regulatory Branch, CESWG-PR-RE PO Box 1229 Galveston TX 77553-1229

Subject: Shoal Point Container Terminal Truck Traffic Impact On Omega Bay/Bayou Vista Community

Dear Sharon,

The proposed project will have a tremendous effect on the Omega Bay/Bayou Vista Community. My home is in the Omega Bay subdivision. I am on North Redwing, which means my home is located approximately 150-200 feet from I-45's southbound service road. I work out of my residence as a Liability Claims Adjuster. A certain amount of road noise and vibration is a part of living so close to the highway. I accept the fact that each morning as traffic rolls down the freeway at 70 plus miles per hour, truck traffic moving down the freeway will bounce. Amazingly enough, that bounce causes my home to vibrate. The largest impact is typically between 7am-8am. After that time, traffic slows down considerably.

Now, what do you think is going to happen when more than 2200 trucks per day start rolling down the service road? All of these trucks must yield to oncoming traffic on Hwy 6 going underneath I 45 to continue either north on 146 or North on I-45's northbound service road. They must slow down. Doing so will require braking and shifting with resulting air pollution. I will hear, smell and feel that traffic all day long. My neighbors who live adjacent to the service road on Omega Drive, will feel and hear those trucks even more so than I.

What's going to happen when I need to exit my community? Will the trucks yield? I doubt it. They will be in a hurry to meet a deadline. They will roll through the yield sign and accidents will occur in part because there is so little distance for those traveling on Hwy 6 to pass the yield sign and merge to the left lane to make a rather sharp turn to head North on I 45's service road.

SM - Sandy McCall letter

SM-1: See responses to VBV-4 and SC-2.

SM-2: See responses to FL1-8 and SE-3.

SM-1

SM-2

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J-142

What's even more disturbing is that 2200 trucks is just the beginning. Our information shows that by the year 2015, Shoal point will blossom to 3723 trucks per day. Now, for 2234 trucks to go through that intersection in a normal 8 hour day, they will average one truck in just under 13 minutes. For 3723 trucks that time frame reduces to one truck in just under 8 minutes. Will these trucks be running more than an 8 hour day? What are the hours of operation? Will they be running when we are sleeping? What type of cargo will these trucks carry? Are they carrying hazardous materials that will place my household in jeopardy? What will happen to my property value? New home buyers attempting to enter the community will readily see the difficulty. I just built this home and moved in on October 23rd. I am already considering moving due to the Shoal Point project.

SM-3: The normal hours of operation of the gate at the proposed terminal would be 7 a.m. -7 p.m. Monday through Friday.

SM-4: A listing of typical cargo carried in containers has been added to Section 1.1. Also see response to FL1-6.

SM-5: See response to FL1-7.

SM-6: See response to FL1-1.

Please consider an alternative route. I understand that an alternative has been proposed and so far is not being recognized. A new road that directly links the port to I 45 would totally avoid any residential areas and ultimately save money by reducing wear and tear on trucks, reduce pollutants, etc.

Sincerely,

Sandy McCall
3 N. Redwing

LaMarque TX 77568

440622/020135

SM-3

SM-4

SM-5

SM-6

January 28, 2002

District Engineer, Galveston District U. S. Army Corps of Engineers Attn: CESWG-PE-R P. O. Box 1229 Galveston, Texas 77553-1229

Gentlemen:

As residents of Omega Bay, we strongly oppose the proposed development of the container terminal facilities at Texas City. The Draft Environmental Impact Statement concluded that this project as currently designed will result in "irreversible negative impacts to the communities of Bayou Vista and Omega Bay".

The container terminal will bring thousands of trucks each day through the I-45/Highway 6 interchange. Here are the numbers presented in the Army Corps of Engineers Draft Environmental Impact Statement.

Year	Trucks per Day
2005	2,234
2015	3,723
2025	10,350

The vast majority of these trucks will be using I-45's Exit 7 and traveling the feeder road directly adjacent to Omega Bay. The Corps own document says trucks will stack up at the intersection for 600 - 1000 feet!

This project does not benefit Omega Bay or Bayou Vista in any way. All we get is the noise, congestion, danger, pollution, inconvenience and reduced property values that accompany these

BM1-1

Alternate routes to this proposed terminal are available. A new special access road running roughly adjacent to the existing flood control levee north of Omega Bay would route traffic north of Omega Bay and Bayou Vista. It would link the terminal directly to I-45 with a fly-over to reduce congestion, noise and pollution around Omega Bay and Bayou Vista.

BM1-2

The DEIS has recognized that the impact on our community will be profound and irreversible. Moreover, it does not have to be that way. There are other solutions. The problem is that the developers of this project want us to pay the price for their economic

Bill Minton

25 N. Sand Piper

LaMarque, Texas 77568

440622/020135

BM1 - Bill Minton letter

BM1-1: Comment noted. See responses to VBV-4, VBV-1, FL1-5, SC-2, FL1-7, and FL1-8.

BM1-2: See response to FL1-1.

January 28, 2002

District Engineer, Galveston District U. S. Army Corps of Engineers Attn: CESWG-PE-R P. O. Box 1229 Galveston, Texas 77553-1229

Gentlemen:

As residents of Omega Bay, we strongly oppose the proposed development of the container terminal facilities at Texas City. The traffic flow to and from this facility will have an extremely adverse impact on our community, while offering no benefit whatsoever to Omega Bay. The Draft Environmental Impact Statement concluded that this project as currently designed will result in "irreversible negative impacts to the communities of Bayou Vista and Omega Bay".

Wet lands are being reestablished on the West side of Omega Bay, just feet away from exit 7 where these trucks will exit. The constant noise and pollution will cause damage to the re-growth of the wet land grasses and drive away many of the birds that use these marshes.

Alternate routs to the proposed terminal are available to minimize the environmental damage to these sensitive wet-lands. A new special access road running roughly adjacent to the existing flood control levee north of Omega Bay would by-pass these wet-lands. It would link the terminal directly to I-45 with a fly-over to reduce congestion, noise and pollution around Omega Bay and Bayou Vista.

The air pollution from these trucks added to the already high levels from Texas City industries will cause more health problems among our residents. These people are generally of a retirement age and high levels of NOX, SOX, CO, unburned hydrocarbons and particulate matter are an added risk factor. Already we get a rapid buildup of soot on our house from the freeway and Texas City plants. This has to be washed off several times a year.

We object in the strongest possible terms to the plan for traffic access to this terminal. The EIS has recognized that the impact on our community will be profound and irreversible. Moreover, it does not have to be that way. There are other solutions. The problem is that the developers of this project want us to pay the price for their economic success.

Bill Minton

25 N. Sand Piper

LaMarque, Texas 77568

BM2 - Bill Minton letter

BM2-1: The noise of equipment and increased human activity may disturb some local wildlife; however, it is unlikely that any potential effects to wildlife caused by noise from increased truck traffic would be over and above existing conditions.

BM2-2: See response to FL1-1. Changing the exit would not remove existing impacts to the adjacent wetland areas, which are currently adjacent to IH 45 and its frontage roads and receive the stormwater runoff from these roads. It seems unlikely that any increase in potential impacts to the wetland vegetation caused by runoff associated with increased road and air pollutants from additional truck traffic would be measurable (over and above impacts from current highway and road traffic).

BM2-3: As discussed in Section 4.2.19 of the DEIS, the predominant impacts on traffic loads on IH 45 would be caused by regional growth, with some additional impact, primarily in the form of truck traffic, from the proposed project. As was mentioned in this letter, there is an already existing level of air emissions resulting from existing industrial and non-industrial sources located in the area. It would not be appropriate to attribute the regional air pollution problems solely to the Shoal Point project since they are reflective of long term cumulative growth. Also see responses to SC-2, SGI1-5 and EPA-6.

440622/020135

J-145

BM2-1

BM2-2

BM2-3

DM - Dianne Minton letter

PUBLIC WORKSHOP AND HEARING ON THE DRAFT ENVIRONMENTAL IMPACT STATEMENT FOR THE CITY OF TEXAS CITY'S PROPOSED SHOAL POINT CONTAINER TERMINAL PROJECT

JANUARY 29, 2002 WORKSHOP 5:00 – 6:30 PM; HEARING STARTS AT 7:00 PM

COMMENT FORM

This form is provided for your comments on the Draft Environmental Impact Statement (DEIS) for the City of Texas City's proposed Shoal Point Container Terminal project. Please use the space below, attaching additional pages if necessary. The form may be deposited in the comment box, or mailed to the address provided below. We appreciate your interest in and contributions towards this project.

Comments:	.1
Ilease	reed the
attache	t two pages!
	00
Mail your comments by FEBRUARY 18	, 2002 to:
Sharon Manzella Tirpak Regulatory Branch, CESWG-PE-RE	Please Print: Dianne Mixton
U.S. Army Corps of Engineers P.O. Box 1229	Address 25 n. Sandpiper
Galveston, Texas 77553-1229	

440622/020135

After attending the January 29, 2002 meeting, I came away wondering:

Why wasn't the Environmental Impact Statement Report sufficient to halt the permitting process. The report clearly states that using Exit 7 would have devastating consequences for the Omega Bay and Bayou Vista residents. Destroying any safe means of entering or exiting I45 or Highway 6 from our subdivisions. At this point, Exit 7 will receive 80% the I45 trucks headed to the terminal and Highway 6 will be blocked by the backup of trucks that will be continuously exiting I45.

We are told that the traffic will only affect us between the hours of 7 AM and 7 PM; but the reality of the shipping business is that if a ship is in port, it must be unloaded/loaded and out of port as soon as possible. Trucks will be forming a line by 3 A.M. to get a decent entry slot for the 7 A.M. port opening. We have ask several people who own or manage container related companies and each one have told us to expect these trucks to be on the roads 24/7 and 365 days a year. The operating cost of the ships is so very high that no one can afford to let them sit idly at a dock waiting for Saturday or Sunday to pass or one of our many holidays to be observed. Anyone who did believe this would happen must not be in touch with the reality of the shipping business.

While we are not against the terminal, we do strongly object to the dangers of having these trucks use our pitiful little two-lane asphalt Exit 7 for their major route to Shoal Point Terminal. Frankly, our residents are mostly retirement ages, our driving skills and reflexes may not be up to fighting our way through these none yielding 18 wheelers who will dominate our roads.

DM-1 and DM-3: See responses to SE-3 and FL1-8.

DM-2: The proposed terminal would be operated on a scheduled basis. Ships would be scheduled into the terminal and upon arrival of a ship, its containers would be off-loaded to the terminal yard, not directly onto trucks. Container pick-up and delivery from the yard by trucks would also be scheduled, providing for a steady flow of trucks through the terminal throughout the day during normal operating hours (Monday – Friday, 7 a.m. to 7 p.m.).

DM-2

DM-1

DM-3

Our property values will be destroyed. Our wonderful wildlife, which is just now beginning to return to our lake, will be endangered. The noise and pollution added to what we daily receive from the Texas City refineries will be overwhelming.

Our request: Please do not grant the permit to build until a different exit has been approved by TX Dot or whomever has the authority to make this change. Exit 9 is the best answer, at this time, to resolve this problem. While taking the traffic off our roads, this will also open up new opportunities for commercial development.

Dianne Minton 25 N. Sandpiper

La Marque, TX 77568

409-938-7553

DM-4: See responses to FL1-7, VBV-4, and SC-2.

DM-4 DM-5: Comment noted. Se

DM-5: Comment noted. See response to FL1-1.

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J-148

DM-5

PUBLIC WORKSHOP AND HEARING ON THE DRAFT ENVIRONMENTAL IMPACT STATEMENT FOR THE CITY OF TEXAS CITY'S PROPOSED SHOAL POINT CONTAINER TERMINAL PROJECT

JANUARY 29, 2002 WORKSHOP 5:00 – 6:30 PM; HEARING STARTS AT 7:00 PM

COMMENT FORM

This form is provided for your comments on the Draft Environmental Impact Statement (DEIS) for the City of Texas City's proposed Shoal Point Container Terminal project. Please use the space below, attaching additional pages if necessary. The form may be deposited in the comment box, or mailed to the address provided below. We appreciate your interest in and contributions towards this project.

Comments:	.,	
Bayou Vista is a new	y small community. The	
impact upon us brok	n) the Shool Paint Container	
trucks using the Texas	City Mue to goin a gest will	T11 4
have only a negative	inicact on our quality of like.	TM-1
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las the enormouse tour	la traffic that will be generated	TM-2
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Barry Vinta Charge Bar	should not be meretinaled	
independent ly what we	ill See a pain for tong of	TM-3
allen an lather allen	strice.	
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	- (Prankusyue)	
Mail your comments by FEBRUARY 18	8 2002 to:	
man your commonts by I mortoAff I)	
Sharon Manzella Tirpak	Please Print: Your Name Thursa Mouller - ALDERMAN	
Regulatory Branch, CESWG-PE-RE		
U.S. Army Corps of Engineers	Address 1054 REDFISH Pos.2	<u> </u>
P.O. Box 1229	BAYOU YISTA, TX 77563	
Galveston, Texas 77553-1229	<i>,</i>	

440622/020135

TM – Comment form from Theresa Moeller

TM-1: See responses to FL1-5, FL1-7, VBV-4, SC-2, FL1-8, and FL1-5. Section 4.2.2.7 of the EIS addresses hurricane evacuation issues.

TM-2: Comment noted.

TM-3: Texas City would not be the only entity affected by the proposed project. As discussed in sections 4.2.20 and 4.2.21 of the DEIS, operations-related activities from the proposed container terminal are expected to affect government revenue at local, regional, and national levels.

PUBLIC WORKSHOP AND HEARING ON THE DRAFT ENVIRONMENTAL IMPACT STATEMENT FOR THE JAN 29 2002 CITY OF TEXAS CITY'S PROPOSED SHOAL POINT CONTAINER TERMINAL PROJECT

JANUARY 29, 2002 WORKSHOP 5:00 - 6:30 PM; HEARING STARTS AT 7:00 PM

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Mail your comments by FEBRUARY 18, 2002 to:	1
Sharon Manzella Tirpak Please Print: Your Name Your	
Regulatory Branch, CESWG-PE-RE U.S. Army Corps of Engineers Your Name \(\frac{Ally}{\text{S. Isanol fineer}} \) Address	-
P.O. Box 1229 Galveston, Texas 77553-1229 **To Margue Tr 7756 8** Galveston, Texas 77553-1229	_

KLP - Comment form from Kathy L. Parks

KLP-1 - KLP-3: Comments noted. See responses to FL1-1 and FL1-5.

KLP-1

KLP-2

KLP-3

PUBLIC WORKSHOP AND HEARING ON THE DRAFT ENVIRONMENTAL IMPACT STATEMENT FOR THE CITY OF TEXAS CITY'S PROPOSED SHOAL POINT CONTAINER TERMINAL PROJECT

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Comments:	Del 12-02	
Dear Mr. Surbak	Var (A-A	
as a concerned ho	me owner for 27 years in	
Bayer Vista Jam Conce	erry about Sharl Point continuer	C&LP-1
Jermins and the ump	act it will have on our Community	
The congestion, air pollutes	in increase noise to unamplable	C&LP-2
teres an also con	reine about 17 rece safelilans	
thems will laws on	brukerte volue Dan not lu the	C&LP-3
Terminal at all. Batil it	is faint to be there must be a	C&LP-4
gree alternative Don't le	I the Trafet destroy our communities	
Dayon Vesta and Omega	Bul. O =	
Ú Ú	9,1	
	fulation of	
	aouis Patterson	
AND THE RESIDENCE OF THE PROPERTY OF THE PROPE		
Mail your comments by FEBRUARY 18	8, 2002 to:	
Sharon Manzella Tirpak	Please Print:	
Regulatory Branch, CESWG-PE-RE	Your Name Cont Sauce Patterson	
U.S. Army Corps of Engineers P.O. Box 1229	Mailing and 12022 Rorrance	

C&LP - Comment form from CW and Louise Patterson

C&LP-1: See responses to VBV-1, FL1-8, SC-2, and VBV-4.

C&LP-2: See responses to FL1-5 and FL1-6.

C&LP-3: See response to FL1-7.

C&LP-4: Comment noted.

440622/020135

Galveston, Texas 77553-1229

J-151

pared to o

February 4, 2002

Sharon Manzella Tirpak Regulatory Branch, CESWG-PE-RE U.S. Army Corps of Engineers P.O. Box 1229 Galveston, TX 77553-1229

I am writing to you about the Shoal Point project. Please don't let this project destroy our community. I live in Bayou Vista. My concern is not only for my area, but for all the surrounding areas. It would have an adverse impact on all communites around I-45 with everything from noise and pollution to dangerous traffic situations. You must know the citizens do not want this project as it will ruin "home" as we know it now.

PP-1

Thank you,

Patty Peacock 952 Bonita

Bayou Vista, TX 77563

PP - Patty Peacock letter

PP-1: Comments noted. See responses to VBV-4, SC-2, and FL1-5.

PUBLIC WORKSHOP AND HEARING ON THE DRAFT ENVIRONMENTAL IMPACT STATEMENT FOR THE CITY OF TEXAS CITY'S PROPOSED SHOAL POINT CONTAINER TERMINAL PROJECT

JAN 29 2002

JANUARY 29, 2002 · WORKSHOP 5:00 – 6:30 PM; HEARING STARTS AT 7:00 PM

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Comments:

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I am uus o	much against the use	
Al exit 7 och	al THE South to	
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Bunkling & SA	inte as anyone.	
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Mail your comments by FEBRUARY 18	3, 2002 to:	
Sharon Manzella Tirpak	Please Print:	
Regulatory Branch, CESWG-PE-RE	Your Name	
U.S. Army Corps of Engineers	Address	
P.O. Box 1229 Galveston, Texas 77553-1229		

W&DP1 - Comment form from Wesley and Delores Perren

W&DP1-1: Section 4.2.2.9, Traffic Safety, has been revised to include truck-related accident data and projections of total accidents and fatal truck-related accidents in the Build and No-Build scenarios.

W&DP1-2: Comment noted.

440622/020135

February 3, 2002

Sharon Tirpak Regulatory Branch, CESWG-PE-RE U.S. Army Corps of Engineers P.O. Box 1229 Galveston, Texas 77553-1229

Dear MS. Tirpak:

As residents of Bayou Vista we are asking that you do everything possible to change the route of the thousands of trucks that will be coming and going from Shoal Point Terminal from its currently planned route of exiting from I45 South onto exit #7 to exit#9. The environmental, noise and economic impact will be devastating to this community.

By using exit #7 a truck would have to change lanes while blending onto Hwy 146 to get to Loop 197. Due to the volume of traffic in that area now and the short distance you have in order to get in the proper lane, numerous accidents are almost assured.

Our homes cannot retain their value, the air will be foul and the noise will be intolerable. The majority of our residents are older, retired persons on a fixed income and the lower values to _ our homes will be impossible to regain in our lifetime.

Again we ask that you do what you can to help our community and the adjoining community of Omega Bay. It is our understanding that exit#9 is a non-residential area and would not be adversely affected by this change. Please give us your support.

Yours truly,

Wesley and Dolores Perren

526 Pompano

Bayou Vista, TX 77563

W&DP2 - Wesley and Delores Perren letter

W&DP2-1: See response to FL1-1.

W&DP2-2: In response to comments received concerning traffic congestion, additional weaving analyses were conducted for SH 3/SH 146 between Loop 197 and IH 45. The results of that analysis are presented in the FEIS in Section 4.2.2.6.

W&DP2-3: See responses to FL1-7, SC-2, VBV-4.

W&DP2-4: Comment noted. Also see response to FL1-1.

W&DP2-2

W&DP2-3

W&DP2-4

PUBLIC WORKSHOP AND HEARING ON THE DRAFT ENVIRONMENTAL IMPACT STATEMENT FOR THE CITY OF TEXAS CITY'S PROPOSED SHOAL POINT CONTAINER TERMINAL PROJECT

JAN 29 2002

JANUARY 29, 2002 WORKSHOP 5:00 – 6:30 PM; HEARING STARTS AT 7:00 PM

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Comments:

the environmental empret of this Mega Ret project Appearaghy
no "geople" concerns will be choicesed. As a residut of

Omega Bry I am very concerned about the emport the
truck treffic will make on our community beautiful adjacent
to the SB Prostrip Roal on It & gouth of exit 7. He
have seen the projected interprets of the amount of theta
that will use this route to the Mega Red. It is "Englishing"
to the residual because of the negative emport it will
make to us. I know there are often makes the trucker could
use coming from Howton to the Mega Red. Most will take
the exit I route brease it is a more direct make to the
prepared year. Something must be done to change this
model so our life style will not be ruined by the truck truffic.

Problems are noise, safety, and reduction of property values.

In Omega Pour. My suggestion is to place a commeten read
from the ISH Throntry road to set 3 located north of
the TCT forminal KR track. Force trucks to use this graped.

Mail your comments by FEBRUARY 18, 2002 to: Offerwise we are not in favor.

Sharon Manzella Tirpak Regulatory Branch, CESWG-PE-RE U.S. Army Corps of Engineers P.O. Box 1229 Galveston, Texas 77553-1229 Please Print: M. R. Pinkston

Address # 4 N. Reduing

Oncae Ba Labrage Ft THEE

JRP - Comment form from Mr. and Mrs. John R. Pinkston.

JRP-1: Title 1. Sec. 101 of the National Environmental Policy Act of 1969. as amended, states that NEPA is to be used to, "...foster and promote the general welfare, to create and maintain conditions under which man and nature can exist in productive harmony, and fulfill the social, economic, and other requirements of present and future generations of Americans." Specifically, the purpose of an EIS, as defined in Part 1502.1 of the Act states, "It (the EIS) shall provide full and fair discussion of significant environmental impacts and shall inform decision-makers and the public of the reasonable alternatives which would avoid or minimize adverse impacts or enhance the quality of the human environment." The DEIS, therefore, contains information regarding potential impacts to the human environment from the proposed project, and includes sections discussing air quality (Section 4.2.1), traffic (Section 4.2.2), noise (Section 4.2.3), hazardous materials (Section 4.2.9), commercial and recreational navigation (Section 4.2.18), land use, recreation and aesthetics (Section 4.2.19), socioeconomics (Section 4.2.20), and community infrastructure and municipal services (Section 4.2.21) as well as the physical and biological aspects of the environment.

JRP-2: See responses to VBV-4, FL1-5, and FL1-7.

JRP-3: Comment noted.

440622/020135

J-155

JRP-1

JRP-2

JRP-3

4 North Redwing Dr. La Marque, TX 77568 February 1, 2002 J&CP - John and Carrie Pinkston letter

J&CP-1: See responses to FL1-7, SC-2, VBV-4, FL1-8, and FL1-5.

J&CP-2: See response to FL1-1.

J&CP-3: Comment noted.

Sharon Manzella Tirpak Regulatory Branch, CESWG-PE-RE U.S. Army Corps of Engineers P.O. Box 1229 Galveston, TX 77553-1229

Dear Ms. Tirpak:

We are writing to voice our concerns regarding the truck traffic routing to the proposed Shoal Point Container Terminal. We live in Omega Bay and quite frankly we are adamantly opposed to the current plans. We feel like our homes will take a deep dive in value, our air will be saturated with diesel fumes, the noise will be unbearable, the wildlife will suffer and the access into and out of our property will be impacted, and the chance for a disastrous accident will be greatly increased by the influx of truck traffic.

We would like to suggest an alternate route for the southbound I 45 truck traffic. Rather than using Exit 7 we suggest that a road be constructed along the north side of the TCT Railroad track between IH 45 and SH3. Then the trucks could take Exit 9 to the southbound frontage road and easily access the above mentioned road to SH 3 and then connect with Loop 197 South. Thus all truck traffic bound for the terminal could take this route rather than using the Exit 7 frontage road by Omega Bay.

If this was done we would not object to the construction of the proposed container terminal.

We would like to request that this letter be made a part of the record.

Thank you very much for your consideration of our concerns.

Carrie Vinkston John and Carrie Pinkston

440622/020135

J-156

J&CP-1

J&CP-2

J&CP-3

January 25, 2002

Re: Shoal Point Container Terminal Truck Traffic Impact on our Community

I am writing this letter to inform you of my concerns about this project because it will dramatically impact our way of life in Omega Bay. Its construction and operation will result in dangerous traffic congestion and unacceptable noise impact within our community.

LP-1

The vast majority of these trucks will be using I-45's Exit 7 and will be traveling the feeder road directly adjacent to our community (Omega Bay) prior to turning east and heading towards the new port along Highway 197. It will not only be virtually impossible to get out of our community; it will also be a traffic safety for my family and me. What would happen if we needed an ambulance or fire truck to get in and out of our community?

LP-2

The trucks will cause unnecessary congestion, increase air pollution, and increase noise to unacceptable levels. I am concerned about the toxic materials that these trucks will carry. In addition to all my concerns all these issues will lower our property values.

LP-3

I cannot help but think this will have an enormous impact on the tourism for Galveston and Kemah. The trucks will be traveling I-45 and 146 in large numbers from 7:00 a.m. until 7:00 p.m., 7 days a week.

LP-4

Thank you for your time in reading this letter and please put yourself in our homes and see what is happening around us.

Larry Preuit

9 N Curlew St.

La Marque, Texas 77568

LP – Larry Preuit letter (Identical letter sent in by Pam Preuit)

LP-1: See responses to VBV-1, FL1-5, and VBV-4.

LP-2: See response to FL1-8.

LP-3: See responses to LP-1 above, as well as SC-2, FL1-6, and FL1-7.

LP-4: See responses to EPA-64 and SM-3.

Raymond and Michele Puccetti 18 South Curlew La Marque, Texas 77568

R&MP – Raymond and Michele Puccetti letter

R&MP-1: Comment noted. See response to FL1-1.

January 25, 2002

Ms. Sharon Manzella Tirpak Regulatory Branch, CESWG-PE-RE U.S. Army Corps of Engineers P.O. Box 1229 Galveston, Texas 77553-1229

RE: Shoal Point Container Terminal Truck Traffic Impact on our Community

Dear Ms. Tirpak,

Please consider a safer, no-impact alternative road access to the Shoal Terminal. A new road running adjacent to the flood control levee north of Omega Bay would directly link the port and I-45 saving miles of additional driving for the trucks and make the neighborhood safer.

R&MP-1

Raymond + Mille Records

Raymond and Michele Puccetti

P.O. Box 16225

Galveston, Texas 77552

Cc: The Honorable Nick Lampson, U.S. Representative District 9
The Honorable Craig Eiland, State Representative District 24
The Honorable Eddie Janek, County Commissioner Precinct 2
The Honorable Dennis Rygaard and Council, City of La Marque
The Honorable Carlos Garza and Council, City of Texas City

Philip L. Randolph 8 South White Heron La Marque, TX 77568 (409) 938 - 3455

February 05, 2002

Sharon Manzella Tirpak U.S. Army Corps of Engineers, Galveston District Regulatory Branch P.O. Box 1229 Galveston, Texas, 77553-1229

re: Comments on the Draft EIS for the Proposed Shoal Point Container Terminal

Dear Ms. Tirpak:

The treatment of the traffic problem in the I-45, SH-6, Sh-3/SH-146, Loop 197 area fails to consider several aspects that would make the traffic problems in the vicinity of the Texas City Wye much worse than set forth in the subject document. This makes it even more important that proponents of the terminal and officials responsible for road design and construction cooperate to implement the shorter route from I-45 to the terminal access corridor that parallels the hurricane levee.

I have no problem with the treatment of the southbound I-45 frontage road at the entrance to Omega Bay. At that point the frontage road is two lanes wide and only about 130 homes generate traffic in and out of Omega Bay. However, for the traffic to proceed from those homes to points north, the cars must merge into a single lane with the estimated 600-1000 foot long queue of trucks, and go through weaving under the freeway with traffic from over 1200 homes off SH-6 before proceeding north on either the I-45 northbound frontage road or SH-3/SH-146. The Draft EIS does not address the delays due to the merging and weaving for those 130 Omega Bay Homes.

There are more than 1200 additional homes whose primary access to the north is via SH-6 and under the freeway to either the northbound freeway frontage road or SH-3/SH-146. These homes are in Bayou Vista, Omega Bay and across Highland Bayou. To get to I-45 north, traffic from these homes must weave from the right lane to the left lane through the trucks under the

PLR - Philip L. Randolph letter

PLR-1: Comment noted. See response to FL1-1.

PLR-2 – PLR-5: In response to public comments, additional weaving analyses were conducted for SH 3/SH 146 between Loop 197 and IH 45. The results of that analysis are presented in the FEIS in Section 4.2.2.6.

PLR-1

PLR-2

PLR-3

freeway in a distance of only 200 yards. The Draft EIS does not include a traffic count on SH-6 and therefore apparently did not include the SH-6 traffic in the weaving analysis.

It appears that the Synchro modeling analysis queue length of 600 to 1000 feet south of the SH-3 and Loop 197 intersection is a case of garbage in/garbage out. At that intersection two lanes proceed unimpeded from SH-3/SH-146 to Loop 197. There is a smooth two lane wide transition with no traffic light or stop sign. On the other hand, the trucks passing through this intersection on the way to the terminal must first weave through two lanes of northbound traffic from Galveston to get to Loop 197. The Draft EIS does not contain a traffic count from the south or contain a weaving analysis for this bottleneck where the weaving must take place in a distance of only a couple hundred yards.

A third missing weaving analysis is for truck traffic from the terminal to the northbound I-45 frontage road. Just south of the Loop 197 intersection with SH-3/SH-146, the trucks will have only a few hundred yards to weave through the southbound traffic from SH-3/SH-146 to SH-6 and I-45.

A final point is that the draft EIS makes no mention of the peaking of truck traffic that will occur early each morning. It is normal for trucks to be queued up at the terminal entrances when the gate opens each day. The expected large fraction of local destinations will further contribute to morning peaking of traffic. Namely, those trucks that get in early enough may well get two round trips in a day whereas those that reach the terminal midday will only get revenue from one trip.

The considerations above make a strong case for the need for an alternate to the Texas City Wye for terminal traffic. A route paralleling the hurricane levee from I-45 to the terminal access corridor at Loop 197 would provide an excellent means to bypass these problems. The route would not impact any residential areas and could well use existing Exit 9 from I-45 as well as the existing roadway under the freeway at the levee and railroad tracks.

Sincerely yours,

Philip L. Randolph

PLR-6: The terminal entrance (gate) would be located on Shoal Point rather than at the intersection of the access road and Loop 197. Therefore, the 3-mile access road would be used to queue trucks that arrive prior to gate opening (7a.m.). Also see response to DM-2.

PLR-7: Comment noted. Also see response to FL1-1.

PLR-4

PLR-5

PLR-6

PLR-7

FEB 2 1 2002

PUBLIC WORKSHOP AND HEARING ON THE DRAFT ENVIRONMENTAL IMPACT STATEMENT FOR THE CITY OF TEXAS CITY'S PROPOSED SHOAL POINT CONTAINER TERMINAL PROJECT

JANUARY 29, 2002 WORKSHOP 5:00 – 6:30 PM; HEARING STARTS AT 7:00 PM

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Comments:

I don't see how this area can achieve acceptable air

guality if this port adds to the current pollution load.

The port will add to the existing water pollution by a combination of air pollution that eventually ends

up in tralveston Bay, and the increased risk of ship accidents.

Can the Galveston Bay ecosystem absorb the impact of the increased pollution load?

The port will increase area population which will increase traffic congestion and add to the demands on already overburdened public facilities such as schools.

This whole area will be hit by a mayor huricane someday. Does it make sense to keep on adding development that will be at risk. The potential loss from a major storm could be enormous.

LAR-5

Mail your comments by FEBRUARY 18, 2002 to:

Sharon Manzella Tirpak Regulatory Branch, CESWG-PE-RE U.S. Army Corps of Engineers P.O. Box 1229 Galveston, Texas 77553-1229 Please Print: Leo A. Reitan
Your Name Leo A. Reitan
Address 5/1 willlamsburg GIT.
Friendswood, TX 77546

LAR - Comment form from Leo A. Reitan

LAR-1: See response to SGI1-5.

LAR-2 and LAR-3: See responses to GBF1-6and EPA-41. Issues related to ship traffic are discussed in Section 4.2.18 for the Shoal Point site.

LAR-4: See responses to VBV-1, and EPA-65.

LAR-5: Comment noted.

FEB	n	7	2002

1600 Westword are. La Marque, 4, 77568 Tebruary 1, 2002

Col. Leonard Waterworth U.S. army Corps of Engineers P.O. BOX 1229 Galuston, A. 77553-1229

Dear Sir:

Please do not give a permit for the Superport Noute to go through the City of La Marque. I live at 1600 Westward are in La Marque near the freeway Interstate 45 hetween exit 10 and 11. My concerns include noise, oir pollution, buffic Congestion and safety. The peak times Tam to saily afternoon are the only times hesides at night when The noise level is dits best of these trucks are going to be going by my house 24 hours a day at one energ 30 seconds that is unacceptable for me to be able to line here. also are these trucks ging to be inspected for emissions and noise and saftity. The added congestion during times we need to evacuate for a hurricane is another concern of home The hencet for Fifas City will be at the expense - of the people who live neck the fraway in La Marque over DTS - Donna T. Simmons letter

DTS-1: Comment noted.

DTS-2: See responses to, VBV-4, EPA-34, SC-2, SGI1-5, VBV-1, and FL1-5.

DTS-3: Comment noted. See responses to VBV-4, SM-3, and PLR-6.

DTS-4: See responses to SC-2 and SGI1-5.

DTS-5: Comment noted. Section 4.2.2.7 of the EIS addresses hurricane evacuation issues.

DTS-6: Comment noted. See response to TM-3.

440622/020135

DTS-1

DTS-2

DTS-3

DTS-4

DTS-5

DTS-6

and every city north of us on Interstets 45.

Ber, Velasquez of PB5 & g said she is telling it

like it is and you will make the fine (
decision. Please come by my house
and see how close to the freeway & am,

Not only me but many others. People
on Thelody Lane, Theadow Lane, Houston

Srine 5 and others. For some reason
they just haven't complained yet. also

these homes were here even before the
freeway was built.

Oliase take consideration of the concerns of have spoken. Your attention is hoped for.

Sincerely, Donna F. Simmons 409-935-5077

PUBLIC WORKSHOP AND HEARING ON THE DRAFT ENVIRONMENTAL IMPACT STATEMENT FOR THE CITY OF TEXAS CITY'S PROPOSED SHOAL POINT CONTAINER TERMINAL PROJECT

JAN 292002

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Commer	its: PLEASE C	on (i) OD	USING	Exit
# 9	AND BUILD	onsider New Ro	7-D	
·····	lom Residen	SpANG/ELL	BAU	
	- CEAT DATA			

			3	
Mail you	comments by FEBRUARY 18	3, 2002 to:		
Regulato	lanzella Tirpak ry Branch, CESWG-PE-RE y Corps of Engineers 1229	Please Print: Your Name Address		
Galvesto	n, Texas 77553-1229	-		

Comment form from Tom Spangler

TS-1: Comment noted. See response to FWS2-5.

440622/020135

TS-1

PUBLIC WORKSHOP AND HEARING ON THE DRAFT ENVIRONMENTAL IMPACT STATEMENT FOR THE CITY OF TEXAS CITY'S PROPOSED SHOAL POINT CONTAINER TERMINAL PROJECT

AS-1: See response to FL1-8.

JANUARY 29, 2002 · WORKSHOP 5:00 – 6:30 PM: HEARING STARTS AT 7:00 PM AS-2: See responses to VBV-1 and FL1-8.

COMMENT FORM

AS-3: See response to VBV-4.

AS-4: See responses to FL1-7.

Comment form from Alice Stokley

This form is provided for your comments on the Draft Environmental Impact Statement (DEIS) for the City of Texas City's proposed Shoal Point Container Terminal project. Please use the space below, attaching additional pages if necessary. The form may be deposited in the comment box, or mailed to the address provided below. We appreciate your interest in and contributions towards this project.

AS-5: See response to FL1-1. Comment noted.

Comments:

I LIVE IN OMEGA BAY. I AM NOT AGAINST THE TERMINAL. I FEEL WE WILL have problems with:		
1) Abulance SERVICE ACCESS		AS-1
2) I beleive the traffic will be	٦	AS-2
WORSE THAN PROJECTED. 3.) The Noise from the trucks WILL be to hard to Live with. T use to drive truck.		AS-3
4.) PROPERTY DALUE WILL DROP.		AS-4
PLEASE CONSIDER EXIT 9 AS AN ALTERNATIVE. No homes ALONG That ROUTE.		AS-5

Mail your comments by FEBRUARY 18, 2002 to:

Sharon Manzella Tirpak Regulatory Branch, CESWG-PE-RE U.S. Army Corps of Engineers P.O. Box 1229 Galveston, Texas 77553-1229 Please Print: ALICE STOKLEY
Your Name ALICE STOKLEY
Address 20 N. ONLEGH
ZA MARQUE TX

236 Barracuda Bayou Vista, Texas 77563

February 9, 2002

Colonel Leonard D. Waterworth District Engineer, Galveston District Department of the Army, Corps of Engineers P.O. Box 1229 Galveston, Texas 77553-1229

Dear Colonel Waterworth:

As a resident of Bayou Vista, I am extremely concerned with the impact that the proposed container terminal will have on traffic congestion, traffic safety and my property value, if truck traffic is primarily routed to the I-45 feeder road at Omega Bay and in the vicinity of the Texas City Wye/Loop 197 area as currently proposed.

I have reviewed the Draft Environmental Impact Statement (DEIS) for Texas City's proposed Shoal Point Container Terminal and find that the traffic impact analyses to be deficient, inadequate and inconsistent. Therefore, I believe the DEIS must be significantly revised in order to comply with the National Environmental Policy Act (NEPA). The DEIS lacks sufficient information to assess the affects of the proposed project on the quality of the human environment as required by NEPA. Information in the DEIS is inadequate to assess traffic impacts to local residents in the area of the Texas City Wye because: 1) only one assumed truck trip scenario was examined; 2) the DEIS only examined existing truck routes; and 3) did not identify any mitigation measure as required by NEPA. In fact, the DEIS did not even address potential truck traffic mitigation options.

I have only reviewed the traffic impact analyses for the Shoal Point Alternative, since it directly affects me and it is the preferred alternative. However, I suspect that you will find similar inadequacies with the traffic impacts assessment for all of the alternatives examined. My specific comments follow:

SPECIFIC COMMENTS

EXECUTIVE SUMMARY

ES.3.2.1 Proposed Alternative - Shoal Point

pg ES-6, par 4 -The discussion on rail should identify the distance to and the location of the UPRR, BNSF railroad and Barbours Cut intermodal yard. It should also identify what year the proposed intermodal railroad yard would be operational.

RS-4

440622/020135 J-166 RS - Rusty Swafford letter

RS-1: See responses to FL1-1, VBV-1, FL1-5, and FL1-7.

RS-2: See response to VBV-2 and to specific comments below.

RS-3: Comment noted.

RS-4: Distances from each alternative site to the railroad yards have been factored into the analysis by H-GAC. As indicated in Section 2.4.2.5, an off-site intermodal yard would be constructed when justified by the growth of the terminal. For purposes of the traffic analysis, it was assumed that this facility would be operational by 2025.

RS-1

RS-2

RS-3

ES.4 ENVIRONMENTAL ISSUES

pg. ES-11 - See the following comments on specific sections of the document.

2.0 ALTERNATIVE ANALYSIS

2.4.2.5 Rail Access

pg 2-25, par 1 - Additional information is needed in this section to clearly identify how rail operations will be utilized for the Shoal Point alternative. The discussion on rail should identify the distance to and the location of the UPRR, BNSF railroad and Barbours Cut intermodal yard and the likely routes trucks would use to deliver containers to these yards. Maps of these yards should also be provided to orient the reader. It should also identify what year the proposed intermodal railroad yard would be operational. At the January 21, 2002, workshop, project engineers stated that the rail yard would not be constructed until 2010-2015. Is the assumption made later in the DEIS that 20 percent of the containers will travel by train valid in years prior to 2025? Were the trucks needed to move the containers to the three existing yards included in the traffic evaluation for years 2005, 2010, 2015 and 2020? If so, where is the discussion and supporting documention? The above requested information should be included in the Final EIS.

RS-5

Section 3.0 AFFECTED ENVIRONMENT

3.2 ROADWAY TRAFFIC

3.2.2 Data Collection and Analysis Methods

pg 3-11, par 1 - The number of samples (1 day) appear too few to have any statistical validity. Is collection of traffic data for one 24 hour period during one year standard operating procedure in traffic engineering? Was the day randomly selected for sampling? Were standard engineering protocols for sampling traffic and noise followed? Are there significant differences in traffic patterns during different days of the week, seasonally or during holidays and special events (Kappa weekend or Mardis Gras) that may affect truck routes? Was a traffic accident scenario studied? Several times during the year traffic is backed up past the Texas City Wye because of an accident on I-45 or during holiday weekends and special events. One could envision that during a traffic back up, truck traffic would find alternative routes to the port. This could force trucks down Palmer Highway in Texas City, Main Street in LaMarque, or some other route. Was this even investigated? This section needs to be significantly revised in the Final EIS to include the above requested information.

RS-6

3.2.2.1 Traffic Counts

pg 3-11, par. 1 - The major intersection at I-45/SH6/SH146, locally known as the Texas City Wye, was not included in the list of intersections studied. Was the intersection studied? If so, it

RS-7

440622/020135 J-167

RS-5: See response to RS-4. Information on preliminary truck traffic movements and rail traffic movements used as the basis for the traffic analysis is provided in Appendix C-3 of the DEIS. A map indicating the location of the existing intermodal facilities has been added to Section 3.2.2.

RS-6: Standard methods were used in the traffic analysis (see Section 3.2.2 of the DEIS). Traffic is recurring; therefore, a typical weekday "PM" was chosen for the design hourly volumes, based on engineering judgment. The count data used was a combination of TxDOT counts, H-GAC counts, and PBS&J counts. Since typical traffic counts are used in the model, traffic counts taken during a special event or accident scenario would not be appropriate for establishing anticipated traffic patterns. H-GAC performed modeling to determine the routes most likely to be taken by truck traffic considering the results of the origin/destination study conducted at Barbours Cut.

RS-7: The intersections analyzed were signalized or all-way or two-way stopped controlled intersections. The signalized intersection located at SH 3/SH 146 and Loop 197 was used to represent the IH 45/SH 6/SH 146 intersection.

needs to be listed. If not, there needs to be an explanation of why not in the DEIS and a study of the intersection included for the Final EIS.

3.2.2.5 Trip Generation

pg 3-13 - This section is the heart of the traffic analysis because the number of trips generated are significant inputs to the noise, air, and traffic models. Yet, the DEIS lacks sufficient information for the reader to evaluate the reasoning behind the assumptions provided in the truck trip spread sheets in Appendix C. It also does not define the difference between "Trucks (Highway)" and "Trucks (Intermodal)" found in Appendix C. There is also no explanation as to how an 80% truck and 20% rail split or a 77% Highway Truck Trips and a 23% Intermodal Truck Trips split was derived for use in the models. This section cites a 2001 PBS&J traffic report, however, neither the report results or a summary of the findings are provided for the reader in the DEIS or in the appendices. In any modeling effort, be it traffic, noise, global warming, or hydrodynamics, data inputs and assumptions made by the modeler will effect the outputs of the model, hence with modeling the old saying, "Garbage in, garbage out" is often used. Therefore, this section should be significantly revised to include a serious discussion of the modeling effort and the reasoning behind the model assumptions. Of particular interest, is why only one set of truck movement patterns and truck/rail splits were analyzed, given the fact that the models are projecting 20 years into the future. Why was a "worst case" scenario not evaluated for impacts to the Texas City Wye area? For example, what if 60%-80% of the trucks utilized I-45, rather than 42% as assumed by the modelers? How would this affect air, noise, traffic weaving, safety and other quality of life issues for the local residents of Bayou Vista, Omega Bay and Old Bayou Vista? Lack of the this information leads the reader to believe that the inputs were massaged to get the "no effect" results found later in the document. This section should be significantly revised and upgraded for the Final EIS.

Table 3.2.2-2 LOS CRITERIA FOR BASIC HIGHWAY SEGMENT

pg 3-14 - To comply with the national air standards, it has been reported that the TNRCC is requiring the speed limit in Galveston County (i.e., I-45, SH146 and SH3) to be reduce from 70mph to 55 mph. Therefore, the table should be revised and updated. Is the level of service (maximum density) for a free flow at 55mph different than the level of service at 70 mph? If so, the level of service analysis needs to be re-analyzed for the Final EIS.

3.2.3 Traffic Safety

pgs 3-14 and 3-15 - This section provides a discussion of national and state traffic statistics, however, it presents no data on existing traffic safety conditions in the vicinity of the Shoal Point alternative. In addition, there is no discussion of why the number of accidents/fatalities involving trucks from the Shoal Point alternative were not modeled, evaluated or reported in the document. There is an acknowledged four times greater fatality rate for accidents involving trucks. The project is estimated to generate over a half a million truck trips in 2005 and over 2.2

RS-8: "Trucks (intermodal)" refers to the trucks that would haul containers between the container terminal and rail yards. The documents referenced in development of the trip generation tables, including the origin/destination study conducted at Barbours Cut, are listed in Section 3.2.2.5 of the DEIS. The intermodal split was based on similar container terminal operations. The truck movement patterns were established by modeling conducted by H-GAC to determine the routes most likely to be taken by truck traffic considering the anticipated origins and destinations of the cargo.

RS-9: The main corridor analysis is based on maximum density, which is the same for all free-flow speeds. Table 3.2.2-1 has been revised to remove the reference to 70 mph because the LOS threshold is actually the same for all free-flow speeds according to the Highway Capacity Manual.

RS-10: See response to FL1-5.

RS-9

RS-8

RS-10

million truck trips annually after 2023. Consequently, traffic safety is a potential adverse project impact to the quality of the human environment that was not adequately evaluated in the DEIS. Therefore, the Final EIS should include an in-depth discussion of traffic safety in the area of the Shoal Point alternative.

pg 4-50, Table 4.2.2-13 Traffic Accident Data. This table presents a summary of accident data for the Texas City Wye for years 1997-2000. This table should be presented in the affected environment section 3.2.3 because it discusses the current condition with no project. It also does not show how many of these accidents involved trucks.

3.3 Noise

See previous discussions on sections 3.2.2 and 3.2.2.5.

Other Issues Not Evaluated in Section 3.0

There is no discussion in this section on current truck induced road maintenance in the area of the Shoal Point alternative. This is important, because when the project is functioning at capacity over 2.6 million truck trips are expected to be generated annually by the project and road maintenance will have to be funded by the taxpayers of Galveston County. The Final EIS should include a discussion and evaluation of the current design life, maintenance costs and the economic impacts to taxpayers for road repairs attributable to the Shoal Point alternative.

SECTION 4 ENVIRONMENTAL CONSEQUENCES

4.2 SHOAL POINT - APPLICANT'S PROPOSED SITE

4.2.1.1 Impacts

pg 4-32, bullet 6 - The bullet states that an assumption was made that 80 percent of the containers would be destined to the Houston area. The underlying reasoning behind this assumption needs to be documented in the Final EIS.

4.2.2 Roadway Traffic Impact Analysis

pg 4-35, last par. - The DEIS states that traffic impacts were analyzed for the years 2001 (existing condition), 2005, 2010, and 2025. The Final EIS should also include an analysis of the years 2015 (Phase II maximum capacity) and 2020 (Phase III in operation for 5 years).

4.2.2.1 INTERMODAL DISTRIBUTION

pg 4-36 - Table 4.2.2-1 only addresses distribution in the year 2025. Why were the other years

RS-11: Table 4.2.2-14 has been revised to include truck-related accident data. It has been left in the impacts section to facilitate comparison with the new Table 4.2.2-15, which provides projected traffic accident information for the Build and No-Build scenarios.

RS-12: Roadway maintenance and repair are the responsibility of TxDOT.

RS-11

RS-13

RS-14

RS-13: This assumption is based on the origin/destination study conducted at Barbours Cut.

RS-14: The reference to the year 2010 was a typographical error in the DEIS. The year should have been referenced as 2015 and has been corrected in the FEIS. Analyses were completed for the years 2001, 2005, 2015, and 2025, corresponding with current conditions, projected conditions for Phase I (first full year of operation), Phase II (at capacity), and Phase III (ultimate design) (See Table 4.2.2-2 and subsequent sections).

RS-15: Table 4.2.2-1 (and the corresponding table for each alternative site) has been revised to include the years 2005 and 2015. Also see response to RS-6 and RS-8.

that were analyzed (2005, 2010) not included in the table? This information, including additional analyses for years 2015 and 2020, should be included in the Final EIS. Additionally, there needs to be an explanation and supporting documentation of why only one analysis of traffic distribution was examined, especially when the table is predicting 23 years into the future. See comments on section 3.2.2 and 3.2.2.5 concerning the results of H-GAC's modeling effort.

Quite frankly, the lack of alternative distribution analyses in this study is biased, rudimentary, insulting to ones intellect and does not meet the requirements of NEPA. Therefore, analyses of other potential traffic distribution scenarios should be included in the Final EIS.

4.2.2.2 Intersection Analysis

pgs 4-38 thru 4-41 - Level of Service(LOS) impacts are based upon a single assumed traffic distribution based upon undocumented model assumptions. See above comments on section 3.2.2, 3.2.2.5 and 4.2.2.1. Analyses of alternative traffic distribution scenarios and their affect on LOS should be included in the Final EIS.

pg 4-38 - Table 4.2.3-3 presents an analysis for the year 2015, contrary to the statement on page 4-35 that the only years analyzed were 2001, 2005, 2010, and 2025. In addition, the table does not include an analysis of the Texas City Wye intersection, which is a major intersection to be impacted by the Shoal Point project.

pg 4-39 - Figure 4.2.2-1 does not include the Texas City Wye intersection. This is a major intersection that should be included in the Final EIS.

pg 4-40 - Figure 4.2.2-2 does not include the Texas City Wye intersection. This is a major intersection that should be included in the Final EIS.

4.2.2.3 Main Corridor Analysis

pg 4-42 - See comments on sections 3.2.2, 3.2.2.5, 4.2.2.1 and 4.2.2.2. Additionally, paragraph five states that specific highway improvement projects planned in the future were included in the model. Improvements of the Texas City Wye intersection with I-45 are projected to be contracted in 2010. What did the modelers use as the intersection design? What year did the modelers assume the construction would be finalized and the projected benefits realized? These are significant undocumented inputs to the model that directly impact LOS, safety, weaving, air and noise pollution projections of concern to local residents in Omega Bay, Bayou Vista and Old Bayou Vista. What is the impact of the improvement project on Shoal Point traffic patterns during the construction phase? Will these improvements change truck traffic patterns (e.g., easier and faster to travel I-45) to and from Shoal Point? What happens to traffic if the intersection is not improved or the improvements are delayed 5-10 years? In addition, Table 4.2.2-5 lists three projects, SH146 at Loop 197, SH146 at NASA 1, and SH146 at Dickenson

RS-16: See response to RS-6, RS-8, and RS-15.

RS-17: It is assumed that the commentor is referring to Table 4.2.2-3, which, presents Shoal Point intersection traffic analysis results. See response to RS-14.

The Texas City Wye intersection is presented in Table 4.2.2-3 as intersection 12, SH 3 at Loop 197. See response to RS-7.

RS-18: The Texas City Wye intersection is represented on Figure 4.2.2-1 as intersection 12. SH 3 at Loop 197. See response to RS-17.

RS-16 RS-19: See response to RS-18.

Loop 197

SH 3/SH 146

RS-17

RS-20: Proposed transportation improvements in the Texas City area that were included in the traffic analyses are presented in Table 4.2.2-5 and in Appendix C-7 of the DEIS. Analyses were performed using the most current data available from TxDOT.

Anticipated improvements at the Texas City Wye were included in the H-GAC modeling as follows:

No. of No. of No. of RS-19 Lanes in Lanes in Lanes in **Road Segment** 2005 2015 2025 IH 45 6 8 8 SH 6 (W of IH 45) 4 4 SH 6 (E of IH 45) 4 4

4

4

RS-20 Limitations in the model for the weaving analysis did not allow the improvements described above for the Texas City Wye to be included in the modeling. Additionally, the intersection geometry following potential improvements is unknown at this time. The weaving analysis for the Texas City Wye could, therefore, be considered a "worst case" scenario because, although projected traffic loads increased in the model, the infrastructure in the area was not changed from its current configuration.

4

4

4

6

Bayou Bridge, that have "no available" contract let dates. What year did the modelers assume that the projects would be finished and what was the reasoning behind the assumptions? This section of the DEIS provides an insufficient level of analysis to project the impacts of the Shoal Point alternative on main corridor traffic in violation of the requirements of NEPA. Additional analyses, traffic distributions and highway improvement scenarios should be run and presented in the Final EIS.

4.2.2.4 Proposed Intersection and Roadway Improvements

pg 4-45 - See Comments on section 4.2.2.3.

4.2.2.5 Railroad Crossing Impact

pg 4-46, par 1 - Why was the delay per vehicle averaged over a 24 hour period? What is important to a motorist is that four additional trains will block an intersection delaying their trip through an intersection for a certain period of time. Therefore, the model results should be presented in total time a car will be delayed by a train. The time of day a train passes will also affect total delay time because the number of vehicles on the road during a train pass affects queue lengths. Therefore, an analysis of peak traffic times when commuters are typically commuting to and from work and off peak hours (e.g., lunch time, middle of the day, late in the evening) should also be included in the Final EIS. Additionally, the DEIS did not discuss years analyzed other than 2001 and 2005. The years 2010, 2015 and 2020 should also be included in the Final EIS.

4.2.2.6 IH45/SH6 Interchange

General comments - see previous comments regarding inadequacies in the model analyses covered in comments to sections 3.2.2, 3.2.2.5, 4.2.2.1, 4.2.2.2, and 4.2.2.3. The Final EIS should include in-depth analyses of all probable traffic distribution patterns and a realistic "worst case scenario".

pg 4-46, par 1 - The statement that the proposed improvements to I-45 and the Texas City Wye may take container traffic over or under 1-45, thus lessening the impact on the I-45 frontage road is correct. What is not stated is that these proposed improvements, if ever built, may not relieve truck traffic on the frontage road. The subjectiveness of this statement demonstrates that the consultants for the project do not know what the proposed design of the Texas City Wye is or if it has even been designed yet. Therefore, it is critical to know what was used as model inputs.

RS-21: A 24-hour average was used to represent the delay because peak hours for rail traffic and roadway traffic do not necessarily coincide. Regarding years analyzed, refer to response to RS-14.

RS-22: See responses to RS-6, RS-8, RS-15, RS-16, RS-19, and RS-20. The analysis performed may be considered a "worst case scenario" because it assumes that optimal conditions exist in the marketplace for containerized cargo to utilize the Shoal Point Container Terminal. In reality, the market share of the proposed container terminal may be less than projected, resulting in lower traffic volumes than estimated.

RS-23: See response to RS-20.

RS-21

RS-22

RS-23

Delay Analysis

pgs 4-46 and 4-47 - This analysis only looked at the delay for a person exiting Omega Bay and entering the I-45 frontage road. In the Queue Length Analysis on page 4-47, it states that a 600foot to 1,000-foot line would meet that person as he comes down the frontage road. How can the consultants for the project expect a reasonable person to accept that there would be only a 2.7 second delay and an acceptable level of service? In addition, these results come from one traffic distribution scenario that assumes only 42 percent of the Shoal Point truck traffic will travel I-45 in 2025. This analysis is faulted and inappropriately describes a no project impact, when compared to the future without scenario. In the Final EIS, an analysis of the total time delay for a person leaving Omega Bay to travel under the Texas City Wye and either head north on I-45 or on Sh 146, under a variety of traffic distribution conditions, should be included for years 2005, 2010, 2015, and 2020. Additional analyses for probable alternative traffic distributions for the years of 2005, 2010, 2015, 2020, and 2025 should also be included in the Final EIS.

Queue Length Analysis

pg 4-48, par 1 - The statement that, "Omega Bay residents should not experience truck traffic blocking their entrance/exit." is not very comforting for a person who is entering the feeder road from Omega Bay only to find a 600-foot to 1,000-foot line within a few hundred feet of their entrance. In fact, this statement is insulting, arrogant and without any justification. This statement should be removed from the Final EIS.

pg 4-48, par 2, last sentence - Again, the issue is not whether Omega Bay residents will see truck traffic from SH146/SH3/ Loop197 intersection backing up to their entrance/exit. The issue is that to get to the grocery store, hardware store or countless other businesses in Texas City, the residents of Omega Bay will be stuck in a line of trucks at the Texas City Wye waiting to take a left turn onto SH146/SH3, and then again at the SH146/SH3/Loop 197 intersection. Therefore, this sentence should be removed in the Final EIS and a real analysis, as required by NEPA, on the effects these long truck traffic lines will have on the quality of the human environment should be included.

Weaving Analysis

pg 4-50, par 1- The statement that the proposed improvements to I-45 and the Texas City Wye may take container traffic over or under 1-45, thus lessening the impact on the I-45 frontage road is correct. What is not stated is that these proposed improvements, if ever built, may not relieve truck traffic on the frontage road. Additionally, no weaving analysis was presented for 1) trucks traveling north from the Texas City Wye on SH146/SH3 to Loop 197 or 2) trucks traveling from Loop 197 to the I-45 North feeder road. As currently constructed, traffic traveling north from the Texas City Wye to Loop 197 must merge into one lane of high speed traffic coming from the I-45 North Texas City exit. Also, trucks traveling from the proposed facility on Loop 197 must cross two lanes of high speed traffic on SH146 to access the I-45 North feeder road at the Texas City

RS-24: The 2.7 second delay refers to the difference between the delay under the Build scenario (i.e., 12.9-seconds) as compared to the delay under the No-Build scenario (i.e., 10.2 seconds). Comment noted. See previous responses.

As stated in response to RS-6 and RS-8, the traffic distribution scenario was based on the results of an origin/destination study conducted at a very similar container terminal facility (Barbours Cut), with modeling performed by H-GAC to determine the most likely routes the trucks would take to and from the origins and destinations of the cargo. Also see response to RS-14 regarding analysis years.

RS-25: The statement, as presented in the DEIS, accurately reflects the results of the queue length analysis, which indicates that truck traffic may back up to between 600 and 1,000 feet, but would not block the Omega Bay entrance, which is approximately 1,600 feet from the intersection.

RS-26: Interchange delay analysis for the IH 45 frontage road at Omega Bay entrance, as presented in Table 4.2.2-8, indicate a difference of 2.7 seconds per vehicle between the Build and No-Build conditions for the year 2025. Based on this analysis, the LOS for this intersection would remain acceptable (B). In addition, the capacity analysis for the same intersection indicates the LOS at that intersection for the year 2025 would remain A. regardless of the fact that traffic volume would be higher and approximately 33% more trucks would be included in the traffic volume per day. This reflects the capacity of the frontage road to accommodate the additional traffic volume.

RS-27: See responses to PLR-2 through PLR-5 and FL1-5.

RS-25

RS-26

RS-27

Wye. Even if the Texas City Wye improvements are completed, they are not scheduled to begin until at least 2010, when almost 3,000 trucks are anticipated to be traveling to and from the Shoal Point container port daily. The DEIS provides no analyses of the impact of the project on this forced weaving. It only takes common sense to surmise that the addition of thousands of trucks per day into this traffic pattern will adversely impact safety and thus the quality of the human environment. Therefore, the Final EIS must include an in depth analysis of project related truck and car traffic forced weaving patterns and the potential for truck related accidents and fatalities in the area between the Texas City Wye and Loop 197.

4.2.2.7 Hurricane Evacuation

pg 4-49 - In sentence one, define "ample warning". In sentence two, what is meant by the word "limited", if the port was closed?

4.2.2.9 Traffic Safety

pg 4-50 - See comments for section 3.2.3 and the weaving analysis. This section discusses almost everything but traffic safety. In paragraph two, the first sentence states that a safety analysis was completed, however, no discussion of the results were provided. The first paragraph and Table 4.2.2-13 describes the affected environment/existing conditions. The last sentence of paragraph two, which states, "The terminal may increase the potential for truck related accidents due to the increase in truck traffic.", is the only sentence in the entire section that addresses traffic safety. This statement in and of itself is sophomoric, since it is only logical that the more truck trips generated by the project, the more truck related accidents will occur. In addition, the statement concerning a mitigation proposal by area residents in paragraph three that, "Based upon the results of this study, from a traffic safety and traffic operations standpoint, this proposal does not seem to be justified." is baseless and not supported by the information provided in the DEIS. This section of the DEIS provides an insufficient analysis of traffic safety impact and is in need of a serious re-evaluation in the Final EIS in order to comply with the requirements of NEPA.

4.2.3 Noise

pgs 4-50 and 4-51 - This section totally ignores the noise pollution concerns of Omega Bay residents. There is not even a specific discussion of Omega Bay in the DEIS. This is not acceptable, when one considers that thousands of trucks per day are predicted to travel down the I-45 feeder road within a few hundred feet of peoples homes. This is a clear violation of NEPA and the impacts should be described and addressed in the Final EIS.

OTHER ISSUES NOT COVERED IN DEIS

Mitigation for traffic impacts from the Shoal Point alternative were not even examined in the DEIS. This of course is predicated on the applicant's unsupported and unjustified conclusion that the local residents of Bayou Vista, Omega Bay and Old Bayou Vista will not be adversely RS-28: The phrase "ample warning" is used to imply that action would be taken, provided the weather service could issue a warning in time. The word "limited" was used to imply that normal truck traffic would not continue following a hurricane warning. Standard safety procedures would be followed as outlined in the facility's Hurricane Preparedness Plan (See Section 4.2.2.7 of the FEIS for further details).

RS-29: Section 4.2.2.9, Traffic Safety, has been revised to include truckrelated accident data and projections of total accidents and fatal truckrelated accidents in the Build and No-Build scenarios.

RS-30: A noise analysis for the Omega Bay Subdivision has been added in Section 4.2.3 of the FEIS.

RS-29

RS-30

RS-28

440622/020135

J-173

impacted by the project. The project proponents seem to believe that some future road improvements to the Texas City Wye and area highways will alleviate all of the traffic problems directly resulting from their proposed container port. Of course, this assumption fails to mitigate for traffic impacts that will occur until the improvements are constructed. For example, the Texas City Wye improvements are scheduled for contracting in 2010, with no estimate when construction will be completed or what the design will be. By the year 2010, the project proponents predict that over 2,800 trucks a day will be traveling to and from the proposed facility and at least 42% of those will be traveling in the Texas City Wye area. Clearly, alternative traffic impact mitigation measures need to be addressed in the Final EIS in order to comply with the requirements of NEPA. A reasonable mitigation measure that should be considered in the Final EIS is a special access road utilizing existing I-45 exit 9, with either a highway fly over or a road that roughly parallels the Texas City flood control levee, that would directly connect the project to I-45. This option would direct trucks away from the local residents of Bayou Vista, Omega Bay and Old Bayou Vista, thus mitigating potential noise, air, safety and traffic delay impacts and would provide a direct route from the port to I-45, the proposed main traffic route. This is a "win-win" alternative that should seriously be considered in the Final EIS and final project plans for the proposed port facility.

CONCLUSIONS

In conclusion, I believe that the DEIS inadequately describes the project's impact on the quality of the human environment and is thus inconsistent with the requirements of NEPA. I look forward to the above concerns being addressed in the Final EIS for project. Thank you for the opportunity to review the DEIS for this project.

Sincerely,

Rusty Swafford

cc:

Mayor Joe Mims - Bayou Vista Sharon Tirpak - COE **RS-31:** Regarding mitigation, any actions taken within TxDOT right-of-way are the responsibility of TxDOT. Also see response to FL1-1.

RS-31

To: Sharon Manzella Tirpak Regulatory Branch, CESWG-PE-RE U.S. Army Corps of Engineers P.O. Box 1229 Galveston, TX 77553-1229

Regarding: Traffic Impact on our Community from the Shoal Point Container Terminal

Dear Sharon:

We have been informed of the large number of trucks that will be using Exit 7, thus passing by Omega Bay, to make deliveries to Shoal Point. This number of trucks will create a traffic jam and will be unsafe for those of us who live in Omega Bay. Additionally, the amount of noise will be detrimental to the residence of the Omega Bay.

PJW-1

It appears to me that an alternative route to the terminal should be considered at this time. We beg you to look at the alternative route (a new access road) at this time.

PJW-2

Thank you,

Mrs. Phyllis) Wilters

409-935-4869

Hyllis Walter

PJW-2: See response to FL1-1.

PJW-1: See responses to SE-3 and VBV-4.

PJW – Phyllis J. Walters letter (William Walters sent in identical letter)

January 27, 2002

TO: Sharon Manzella Tirpak Regulatory Branch, CESWG_PE-RE U.S. Army Corps of Engineers P.O. Box 1229 Galveston, TX 77553-1229

I attended a presentation by the Corps of Engineers during last year in Bayou Vista. It was indicated that an environmental impact study was being done and it was already indicated that traffic onto loop 197 would be much heavier and if stopped by a train could cause large backups.

We live on North Omega drive, which is directly adjacent to the feeder road off of I 45, exiting to loop 197 and Highway 6. The speed limit is 50mph and the trucks already using this road create excessive noise and pollution. This already makes getting onto the feeder dangerous and with the amount of trucks that is being proposed will greatly increase the danger. I am extremely concerned that the increased truck traffic will have a large impact on my property values, not including the increased health hazard and possible damage to my home for increased vibration. Exit 7 is an unusual feeder road in that it is a long road and vehicles continue at a high rate of speed passing very close by a large number of homes. Another concern is what occurs during Hurricane evacuations, I'm sure that the port is going to want to move the containers out and this will cause a lot of increased traffic northbound while people are trying to evacuate.

We suggested during the meeting that an alternate route be considered, using 519 or building a new road from the hurricane levy over to highway 3(possibly over 3 and the railroad tracks thus removing potential bottlenecks). Exit 9 feeder road turns under the overpass at the hurricane protection levee and goes around and back to the north. There is no population along this road and it would be very easy to put in a road from this over to highway 3 thus eliminating using the highway 6, 146, loop 197 interchange. It would also eliminate having to merge at the road coming from Galveston. I went over and looked at this alternative and it would solve a lot of problems and needs to be seriously considered. Another suggestion was a large wall be placed along the feeder road which would at least cut down on the noise.

We get no benefit whatsoever from this project, only decreased property values, increased health risks, and increased pollution. Texas City receives all the benefits from the project, they should be the ones that shoulder the increased risks.

Paul and Mary Watson 40 N. Omega Drive La Marque, Tx. 77568 409-908-9148 P&MW - Paul and Mary Watson

P&MW-1: See response to FL1-7.

P&MW-2: Section 4.2.2.7 of the EIS addresses hurricane evacuation issues.

P&MW-3: See response to FL1-1.

P&MW-4: Comments noted. Any actions taken within the TxDOT right-of-way are the responsibility of TxDOT. Alterations or modifications to existing or improved roadways are also the responsibility of TxDOT.

P&MW-5: See responses to FL1-7 and TM-3.

P&MW-1

P&MW-2

P&MW-3

P&MW-4

P&MW-5

PUBLIC WORKSHOP AND HEARING ON THE DRAFT ENVIRONMENTAL IMPACT STATEMENT FOR THE CITY OF TEXAS CITY'S PROPOSED SHOAL POINT CONTAINER TERMINAL PROJECT

JAN 29 2002

JANUARY 29, 2002 . WORKSHOP 5:00 - 6:30 PM; HEARING STARTS AT 7:00 PM

COMMENT FORM

This form is provided for your comments on the Draft Environmental Impact Statement (DEIS) for the City of Texas City's proposed Shoal Point Container Terminal project. Please use the space below, attaching additional pages if necessary. The form may be deposited in the comment box, or mailed to the address provided below. We appreciate your interest in and contributions towards this project.

Comments:

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the R. Prayfie - Re I live one block of to

Liway Hat quafile the ## R. R. truck I am

Concurred about the noise, quality of life, and

Competer a delay at the A. R. crissing.

Lam also Concurred about insequency from Levelty

trying to get to mainline medical Centre that is

C&CW-2

Aprint to the R. R. trad.

......

Sharon Manzella Tirpak Regulatory Branch, CESWG-PE-RE U.S. Army Corps of Engineers P.O. Box 1229 Galveston, Texas 77553-1229 Please Print:
Your Name Charlette and Charles Westerle
Address Pas Shedy Lane
Se Margue, TX. 77568

C&CW – Charlotte and Charles Westerlage letter

C&CW-1: Information regarding railroad crossing impacts is presented in Section 4.2.2.5 for the Shoal Point alternative.

C&CW-2: See response to comment FL1-8.

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W. N. Young 29 N. Curlew LaMarque, TX 77568

February 10, 2002

Sharon Manzella Tirpak Regulatory Branch, CESWG-PE-RE U.S. Army Corps of Engineers P.O. Box 1229 Galveston, TX 77553-1229

Dear Sirs,

I am adamantly opposed to using the feeder road outside of Omega Bay for the truck traffic to the Shoal Point project. The congestion, noise and safety factors make this route totally unacceptable.

The Corp should demand that a new access road be built north of Omega Bay, roughly adjacent to the flood control levee.

Thank you for your consideration.

Sincerely,

W. N. Young

WNY - W.N. Young letter

WNY-1: Comment noted. See responses to VBV-1, VBV-4, and FL1-5.

WNY-2: See response to FL1-1. Comment noted.

WNY-1

WNY-2

811 Murphy Ln. Friendswood, TX 77546 February 4, 2002

Sharon Manzella Tirpak
Regulatory Branch, CESWG-PE-RE
U.S. Army Corps of Engineers
P.O. Box 1229
Galveston, TX 77553-1229

RE: New Port at Shoal Point

I am a property owner in Omega Bay and although I am not opposed to this project itself, el do have several concerns, el am concerned that, as proposed, the truck traffic will have several negative impacts on my community, such ax: unecessary congestion, an pollution, unacceptable noise levels, safety hazards-from traffic + hazardous (toxic materials) materials trucks will carry. Considering the length of time of this project, I am extremely Concerned that these issues will lower our property values. I am very disturbed that your organiza -tion has failed to consider a safer, no-impact alternative --- that of so constructing a new access road especially for this project. I would like to see this project move forward but not at the cost of destroying my community. Dolson a Zendt

DDZ - Deborah Zendt letter (Identical letter received from John A. Zandt.)

DDZ-1: See responses to VBV-1, SC-2, VBV-4, FL1-5, and FL1-6.

DDZ-2: See response to FL1-7.

DDZ-3: See response to FL1-1.

DDZ-4: Comment noted.

DDZ-1

DDZ-2

DDZ-3

DDZ-4

APPENDIX J-4 PUBLIC HEARING COMMENTS AND RESPONSES

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The public notice regarding the 3 proposed project was issued on December 28, 2001. The Corps is neither a proponent or 5 opponent of this project. Ultimately, we are the 6 decision-makers who have to decide if the proposed 7 project is contrary to the best public interests. As such, we are trying to gather as 9 much information as possible in a timely manner to 10 allow us to make an informed decision. Tonight, we 11 are soliciting comments on the draft environmental 12 impact statement and the permit application. But at this point, I'd like to 14 recognize some of the elected officials and 15 representatives that we have in attendance this 16 evening. First of all we have Nick Saum. 18 He's representing state representative Craig 19 Eiland. Nick, where are you? Thank you very much 20 for coming tonight. We also have Mike Jackson, state 22 senator. Sir. Thank you. Mr. Jim Yarbrough, Galveston County 24 Judge. Sir. Thank you very much for attending. And as you all know, we have Carlos

Page 4 1 the permit.

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Page 5 1 Garza, Mayor of Texas City, Texas. Sir. MAYOR GARZA: Thank you, Colonel. COL. WATERWORTH: We also have 4 attending tonight Dennis Rygaard, Mayor of La 5 Marque. Sir. And Natalie Ong, mayor pro tern, City 7 of El Lago. Good to see you again, Natalie. I would also like to introduce the 9 persons at the head table. To my far right, we 10 have Dolan Dunn, chief of regulatory branch at the 11 Galveston District, and Mr. Mark Lumen, Office of 12 Counsel. And also assisting me tonight 14 Mr. Fred Anthamatten who is the Chief of Policy 15 Analysis Section with the Regulatory Branch. And where is Sharon. There we go. 17 Ms. Sharon Tirpak, the regulatory project manager 18 to the proposed Shoal Point Project, and Ms. Cecil 19 Green from PBS&J, the third-party contractor 20 responsible for preparing the draft environmental 21 impact study. Finally I'd like to introduce 23 Marilyn Uhrich and Michelle Castelline from our 24 public affairs. And where are they? Hiding in the 25 corner. Okay. Page 6 I thought public affairs is supposed At this point, all of you should

2 to be well forward to take most of the hot rounds. 4 have registered at the tables located at the 5 entrance. If you haven't, please do so that we 6 have an accurate count of record of the people 7 attending the hearing. If you wish to speak, you should 9 have also filled out a speaker registration card. 10 These registration cards will be used to determine 11 the order of speakers this evening. The format of tonight's hearing will 13 begin with some brief opening comments from Mayor 14 Garza of Texas City representing the permit 15 applicant; and Ms. Cecilia Green of PBS&J who will 16 give the presentation on the draft EIS and the NEPA 17 process. After that, I will open the floor 19 and recognize federal and state elected officials, 20 county judges and mayors who wish to speak. After elected officials, we will 22 begin calling the public to make comments. 23 I will call five people up at a time 24 or one of us at the front desk will call five 25 people. And once your name is called, please 440622/020135

Page 7 1 proceed to the chairs located behind the speaker's 2 podium. We will turn the podium around so it 3 addresses me and we would ask you to move forward 4 to these seats here. Each speaker will be given three 6 minutes to make their presentation. The time 7 keeper will be monitoring the time and will let you 8 know when you have 30 seconds left and when your 9 time is up. When your time ends, please step 11 down and allow the next person the opportunity to 12 speak. 13 Once all five have spoken, the next 14 five will be called forward, and so on, until we 15 have given everybody to make their comments. Everyone who has indicated a desire 17 to present a topic will have the opportunity to do 18 so. Please keep in mind your time is three minutes 19 or less. If you do not need the three minutes, 20 please help us move the process along and only take 21 the time you really need. We have a court reporter recording 23 the transcript of tonight's proceedings to ensure 24 everything presented is included in the official

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25 record.

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3 additional comments that you would like to submit 4 beyond what you are able to address during your 5 time, please submit those in writing. You should understand that written 7 comments, whether received tonight or any time 8 during the comment period, are just as valid and 9 count the same as verbal comments presented 10 tonight. 11 You may submit written comments this 12 evening by dropping them in the comments box at the 13 back of the room or you may submit them in writing 14 to our Regulatory Branch, U.S. Army Corps of 15 Engineers, P.O. Box 1229, Galveston, Texas, 16 attention Sharon Tirpak. In order for your comments to be 18 considered, they must be postmarked no later than 19 February 18th. Let me emphasize that we're not here 21 this evening to take a vote on the merit of the 22 application; we're here this evening to gather as 23 much new information as we can. Once someone has 24 made a particular point regarding the draft 25 environmental impact statement or the permit

1 A couple of additional ground 2 rules. You may not defer your time. If you have 1 application, there's no need to repeat that point 2 again. One final rule: Please be 4 courteous. Everyone deserves the opportunity to be 5 heard this evening, and I will ask for your help in 6 doing that. At this point, I would like to 8 introduce Mayor Carlos Garza, Texas City, for his 9 opening remarks. Sir. MAYOR GARZA: Good evening. My name 11 is Carlos Garza. And as Mayor of the City of Texas 12 City, I want to take the opportunity to welcome 13 you, Colonel Waterworth, your staff, Senator Mike 14 Jackson, County Judge Jim Yarbrough, County 15 Commissioner Stephen Holmes, fellow mayor, mayors 16 pro tern, city counsel members, aldermen and the 17 many citizens that are here tonight to Texas City 18 and to our Doyle Convention Center. Join me in 19 issuing this warm welcome to our fellow 20 commissioners Allysa Landrum and Carl Sullivan who 21 join me here tonight also. By way of an historical background, 23 this proposed container cargo terminal is located 24 at Shoal Point. Shoal Point previously known as 25 Snake Island is an active Texas City Channel Page 10 1 maintenance dredge disposal site. Texas City currently owns 3 approximately 375 acres which it purchased in 1968 4 from the State of Texas on Shoal Point. In 1998, the City of Texas City 6 hired a consulting firm to perform a feasibility 7 study of Shoal Point to ascertain usability, 8 marketability, and competitiveness. The study revealed that Shoal Point 10 could be developed as a container characterized 11 cargo terminal facility. Subsequently, in late 1999, the city 13 issued a request for proposals. In February 2000, based upon the 15 consultants' findings, the City of Texas City filed 16 a United States Corps of Engineers permit 17 application for a container cargo terminal 18 project. In April 2000, the City of Texas

20 City entered into a public/private partnership with 21 Stevedoring Services of America to privately build 22 and operate the terminal. In August 2000, an 23 independent third-party contractor was selected to 24 perform a full environmental impact statement as

25 required by NEPA.

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Page 11 In September 2001, the draft EIS was 2 submitted to the United States Army Corps of 3 Engineers. In addition to the United States 5 Army Corps of Engineers permit, the city has been 6 working with the TNRCC as it relates to air, waste 7 water, and dredge usage issues. It has been working with the Texas 9 General Land Office as it relates to land lease 10 of -- land lease of additional 634 acres of land at 11 Shoal Point. It has been working with the United 13 States Coast Guard to deal with issues of 14 navigational safety. It has been working with the Texas 16 Department of Transportation to deal with highway 17 intersection issues and it has been working with 18 other state and other federal agencies. Since the inception of this program, 20 the City of Texas City has been committed to an 21 open process and the involvement of active and 22 interested groups. One of my first tasks after I became 24 mayor in May of 2000 was to send a letter to 25 Colonel Beekler stating that, quote, "The public

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1 has the right to know about the project, " unquote, 2 and authorizing the Corps of Engineers to, quote, 3 "Make available to the public data involving the 4 ElS and the permitting process." This project, the Shoal Point 6 terminal, will be built in three phases over an 7 estimated 15-year period or as market demands 8 justify. The initial phase will include a 125-acre 9 container yard, two berths, a land-side access 10 corridor along an adjacent channel, the deepening 11 of the existing Texas City Channel from its current 12 40-foot depth to a 45-foot depth, the construction 13 of a new turning basin and the construction of a 14 new shallow water habitat using dredge materials 15 from new construction and ongoing maintenance. Phase II will add another 125 acres 17 along with two additional 1000 foot berths. Phase III will complete the terminal 19 with an additional 150 acres and two additional 20 berths, bringing a total terminal size to a 21 400-acre footprint and six berths. A 50-year dredge material disposal 23 plan will accommodate 50 years of maintenance 24 dredging, meet the project needs for construction 25 material, and beneficially use dredge material to

1 generate a total of \$18 million per year in 2 salaries. Local and state tax revenues during 4 the construction alone were estimated at \$19 5 million per year during Phase I. Phase II and 6 Phase III will each generate \$12 million per year. Once this terminal becomes 8 operational, Phase I will produce approximately 700 9 new jobs with total wages of \$28 million per year. 10 Phase II will create an additional 250 new jobs and 11 by Phase III, it is estimated the total employment 12 will be at 1900 persons. During the operating process of this 14 terminal, local and state revenue -- local and 15 state tax revenues during Phase I operations alone 16 will be approximately \$10 million per year. By Phase III, total payments in 18 local and state tax revenues will be approximately 19 \$25 million per year. I want to emphasize at this 20 juncture that the workforce involved in the loading 21 and unloading of containers at the terminal will be 22 conducted by ILA, union workers. In conclusion, I know that the 24 citizens of La Marque particularly in Omega Bay and 25 Bayou Vista have expressed some concerns about the 440622/020135

Page 15 1 traffic. Let me say that I have met with 3 County Judge Jim Yarbrough, Mayor Dennis Rygaard, 4 two aldermen from Bayou Vista and Mayor Ken 5 Huffsteder of Dickinson. We share your concerns. 6 Let me emphasize that FM 519 has never been 7 discussed as a truck route. The alternate truck route proposed 9 by the residents of Omega Bay and Bayou Vista, in 10 my opinion, is a viable alternative. Judge 11 Yarbrough, Mayor Rygaard and I, as Mayor of Texas 12 City, have agreed to discuss this option with the 13 Texas Department of Transportation and to work 14 together to obtain funding for this option. We agree, I agree, that our 16 neighboring citizens and neighboring communities 17 should not have to weight 10, 12 or 15 years for a 18 solution. Texas City wants to bring new economic 19 opportunities to this area of the county, and to 20 the Texas Central Gulf Coast Region, but we also 21 want to be good neighbors. Colonel Waterworth, this is a great 23 project. I believe that the needs of our country 24 and of this state for future cargo being 25 transported over water routes can be served by this

Page 16 1 project. I believe that all the potential 3 impacts of our project as well as the needs and 4 welfare of our people have been satisfactorily 5 addressed in the draft environmental impact 6 statement. I ask that the United States Army 8 Corps of Engineers issue the permit. Thank you. COL. WATERWORTH: Thank you very 10 much, Mayor. Now I'd like to ask Ms. Cecilia 12 Green to come forward from PBS&J. MS. GREEN: I have a couple of 14 slides for you, if we can get those up. Well, I don't want to delay this. 16 We'll keep working on getting the slides up, but 17 it's the same information that was presented in the 18 EIS process chart that you may have seen during the 19 open house a few minutes ago. I just want to give you a brief 21 summary of the EIS process and where we are in that 22 process with the Shoal Point project. There's the slide. The flow chart 24 gives you the general steps in the process. And 25 I'll give you some dates for those steps in a few

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Page 17 1 minutes. As can you see from this chart, if 3 you can read it, the initial steps in the process 4 involve a preliminary review of the project to 5 determine whether a more detailed review is 6 warranted. In August of 2000, the Corps of 8 Engineers determined that they would require an 9 environmental impact statement for the Shoal Point 10 Container Terminal Project. That was followed by a notice of 12 intent to prepare an EIS, which initiated the 13 formal scoping process. Some of you may have attended the 15 scoping meeting held here in October of 2000. Since that time, the project team 17 has been working on preparation of the draft EIS. As a result of the issues raised 19 during the scoping process, we established working 20 groups to address the key issues that had been 21 identified. These working groups were made up of 22 members of the project team along with 23 representatives of local, state, and federal 24 agencies. Most of the working groups met Page 18

1 monthly from November 2000 through July 2001. Key issues addressed by these groups 3 included air quality, land transportation, water 4 transportation, dredge material management and 5 alternatives. We also held meetings with 7 stakeholders during the EIS preparation process and 8 we held a public workshop here in April of 2001. Input from these meetings and from the working 10 groups was incorporated into the draft EIS as 11 appropriate. Availability of the draft EIS was 13 announced in the Federal Register on January 4th, 14 2001 which initiated the 45-day public comment 15 period. Tonight we're holding the public 17 hearing to solicit your comments on the draft EIS. 18 That's the red box on the slide that you see on the 19 screen. The next step in the process is to prepare 20 the final EIS. As part of this process, we will be 21 preparing responses to the comments received from 22 you during the comment period on the draft EIS. The final EIS will be available for 24 a 30-day review and comment period. The Corps will 25 then use the results of this entire process to

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Page 19 1 assist them in making the decision on the Section 2 10, Section 404 permit for the Shoal Point Their decision will be presented in 5 the form of a record of decision or ROD. The next slide provides some dates 7 for key activities in the process I just 8 described. As you can see, the permit 10 application was originally submitted to the Corps 11 in April of 2000. It was determined complete in 12 August of 2000 and the Corps determined that an EIS 13 would be required and issued a notice of intent to 14 prepare an EIS later that same month. The scoping meeting was held here on 16 October 3rd, 2000, and the draft SIS has been a 17 preparation since that time. As I mentioned before, we held a 19 public workshop on April 24, 2001 and a notice of 20 availability for the draft ElS was issued on 21 January 4, 2002. The green text on the slide 23 indicates where we are today in the process, that 24 is the 45-day comment period and public hearing. The activities in red are yet to be Page 20 1 completed and include the preparation of the final 2 EIS, public review of the final EIS and the Corps 3 record of decision on the permit action. COL. WATERWORTH: Cecilia, thank you 5 very much. This evening we've got three elected 6 officials that would like to make comments. Senator Mike Jackson, would you 8 please come forward. Sir, which way would you like 9 to face, would you like to talk to me or talk to 10 the audience? SENATOR JACKSON: That's fine. 12 You're the boss. Good evening, Colonel. I 13 appreciate the opportunity to be here today. And a 14 very wise gentleman once told me that you would 15 never be criticized for making too short of a 16 speech, so I am going to try to adhere to that 17 advice here tonight. But just a few comments to make. We

19 have an opportunity right here that I think is 20 outstanding for a facility of this magnitude to be 21 done with the public/private partnership relation 22 that we have right here tonight in this opportunity

We have companies that operate these 25 types of facilities all over the world with lot of

23 here.

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Page 21 1 experience that are involved here, it's a very 2 positive reinforcement for the support of this 3 project. 4 Another item that I think is 5 outstanding is the location of this facility is 6 completely within an existing industrial area, far 7 removed from any residential areas, which is not 8 the case in another facility that you're looking at 9 right now a little bit north of here. 10 It's supported by local residents, 11 local elected officials, industry, labor and 12 business organizations, the pilots of Galveston and 13 Texas City, the TNRCC and the General Land Office 14 and the State of Texas. 15 As Mayor Garza said a moment ago, 16 the only concerns that have been voiced to me from 17 anywhere in this community have been recently by --18 on traffic issues and getting trucks in and out of 19 the facility and on to the freeway on 45 and as he 20 stated, there are also Judge Yarbrough and Mayor 21 Garza and other mayors and counsel are working on 22 that to come up with an alternate route that will 23 satisfy the concerns of those people in that 24 community. 25 And I want to express to you tonight

Page 22

- 1 that as my office as State Senator in the State of
 2 Texas, if I can be of any assistance with the
 3 working with the Texas Department of Transportation
 4 I will give my full efforts in resolving those
 5 issues and concerns for those communities right
 6 there.
 7 It seems as though there's a real
 8 easy way to fix that that could possibly even save
- 9 the state some money as opposed to what they're
- 10 planning to do right now, so that looks good.
- 11 The location again of the facility
- 12 is, I think, is a very big positive for this as far
- 13 as access to the Gulf of Mexico, access to the
- 14 deeper water in a more rapid pace as well as all of
- 15 the infrastructure that's existing here for
- 16 transportation once those ships come to dock.
- 17 The City of Texas City I think ought
- 18 to be commended for their openness in this whole
- 19 project. When this first started up, what, a year
- 20 and-a-half ago, they were out expressing and openly
- 21 showing and soliciting input from people about this
- 22 project from the very beginning which is very, very
- 23 positive in my point of view, it's the way that it
- 24 ought to be done and they've done an outstanding
- 25 job like this.

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Page 23 1 Again, these type of projects are 2 exactly what we need in this area. I'm not going 3 to go back over all the facts and the figures that 4 the mayor had, but when you have a private company 5 doing this, we're taking a piece of land that is 6 now not generating any monies in any way, tax-wise 7 for the states or local entities, and to bring it 8 to fruition and to be able to put up numbers that 9 go into the public school system and go to the 10 city, go to the state and other entities in 11 government is a very above deal. 12 And I just wanted to be here tonight 13 to say I'm in full support of this project. And I 14 know that you're going to do a good job about 15 making sure the impacts on our bay which we're all 16 very concerned about and want to do the least 17 amount of disruption that we can do there, you'll 18 do a fine outstanding job there, I know. 19 And again, I want to make sure that 20 I want to exhibit my support for this project. And 21 I thank you for having me here. 22 COL. WATERWORTH: Thank you very 23 much. Senator. 24 I'd like to call forward County 25 Judge Jim Yarbrough from Galveston County.

Page 24 1 JUDGE YARBROUGH: Colonel, thank 2 you. I appreciate your giving me the opportunity 3 the speak tonight. 4 First we want to thank the Corps of 5 Engineers not only for this partnership but 6 Galveston County enjoys a great relationship with 7 the Corps on a number of projects and we appreciate 8 the professional assistance that you gave us in 9 making projects safe and sound and making those 10 projects become a reality and we want to thank you 11 and your staff. 12 This is a rare opportunity; as we 13 see it, a win/win situation. Above and beyond just 14 a pure private sector dollar investment that's 15 going to be made, which is probably the largest 16 project -- stands to be the largest project in 17 literally a generation for this county. 18 It has the opportunity to put local 19 people to work. It has obviously positive impact 20 as far as tax base and tax values for the public 21 entities that are involved. It creates jobs. It 22 creates the opportunity for us to expand the 23 quality of life with those jobs here in Galveston 24 County. 25 And it also does another thing. It

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1 moves us a step closer to being a true partner in
2 this regional economy; that this project will not
3 only impact the mainland portion of Galveston
4 County but the entire county, but this entire
5 region. And we think that this business is good
6 business for southeast Texas and this part of the
7 United States.
       I would also like to take a minute
9 to commend Mayor Garza and his staff, and former
10 mayor Chuck Doyle. To reiterate what Mike Jackson
11 said, the openness in which they've handled this
12 process has been outstanding.
13 They've come across challenge after
14 challenge, issue after issue over the last several
15 years, and they have successfully found solutions
16 to each issue. And the one good thing about open
17 government and public hearings like tonight, when
18 people have an opportunity to scrutinize the
19 project such as this, issues percolate that are
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21 And most recently our neighbors in

20 important to people.

- 22 Omega Bay, La Marque, the other parts of La Marque,
- 23 Bayou Vista, Tiki Island, the ingress and egress
- 24 around -- the transportation issue coming and going
- 25 from this facility is a legitimate issue.

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- 1 And we appreciate it being brought 2 to your attention. Mayor Garza has already had a 3 meeting with local officials to talk specifically 4 about the concerns of transportation around the 5 Texas City Wye. We are going to work shoulder to 6 shoulder as partners with them to deal with the 7 issue.
- We've already got a meeting set up 9 with the Texas Department of Transportation in 10 early February.
- 11 We think the -- for lack of a better
- 12 term, the Exit 9 alternative off of Interstate 45
- 13 makes good sense, not only from helping protect the
- 14 neighborhoods and the communities around the Texas
- 15 City Wye, but it also makes good economic sense.
- 16 We think as we further analyze it, it will prove up
- 17 to be a much quicker, safer transportation route
- 18 for the trucks that come in and out of our new port
- 19 facility.
- So I'm just here to say that
- 21 Galveston County is very supportive of the
- 22 project. We encourage the Corps to move with
- 23 proper judicial haste but we encourage you to issue
- 24 the permit is what I quess I'm trying to say.
- 25 I was thinking of Kelly's on 1-45.

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Page 27 1 But we encourage you to issue the permit, that we 2 do think it's a very important project. And again want to commend Mayor 4 Garza and his staff for the fine work that they've 5 done up to this point. Thank you. COL. WATERWORTH: Thank you very 7 much, Judge. I'd like to ask Dennis Rygaard to 9 come forward, Mayor of La Marque. MAYOR RYGAARD: Thank you, Colonel. 11 As the mayor of the City of La Marque, I represent 12 the people in the City of La Marque. And as a lot 13 of people here know, I'm also a resident of Omega 14 Bay. So I've got a double issue, okay? I really 15 don't have an issue. You've used some words tonight 17 opponent, proponent, we've heard win, lose, we've 18 heard "us," "them," over about the last year or so 19 around issues with the proposed port. And as several people in the room 21 know that the mayor and other folks and I have had 22 conversations and Councilman Ostein from District C 23 in La Marque has been involved in the process to 24 try and find resolution and solutions to the issues 25 that we have.

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As you heard tonight, one of the 2 biggest issues is the traffic issue around Bayou 3 Vista, and the impact it could have on Tiki, Omega 4 Bay, and folks that live in the City of La Marque 5 proper, with the 519. So this was a topic of discussion, 7 and Alderman Bill Jackson here represented Bayou 8 Vista at the mayors and councilmen's meeting on 9 January 9. Following that meeting, we had some 10 conversations with Mayor Garza, and he pulled 11 together all the mayors, aldermen from those 12 surrounding entities, as you've already heard, and 13 we had a pretty productive meeting. But at that meeting, I heard once 15 again that all those entities support the project 16 but not at the expense of the surrounding 17 communities. And they listened. In that room, we all reached 19 consensus in a short period that we needed to do 20 something different. And there needed to be an 21 alternate route. Most of the issues were around 22 which exit on the highway. So we came up with a workable plan 24 to says simply by moving the exit route from Exit 7

25 to Exit 9 and getting assurance that FM 519, Main

1 Street, La Marque would not be an alternate route 2 or truck traffic main thoroughfare, we could work 3 the issue out. I can assure you that night when we 5 left the meeting, Judge Yarbrough and Mayor Garza 6 drove that route to get a feel for the lay of the 7 land. They've also already done some 9 studies about the distance that as you said, 10 there's an opportunity here for the state to even 11 trim some costs with this alternate plan and 12 improve public safety. So we decided that was the 13 way to go. As I said, it will provide for 15 better public safety, it actually give us two lanes 16 where we currently have one, it will lessen the 17 noise and traffic jams and will mitigate the impact 18 on the surrounding residents, existing residential 19 communities. But as I said, Main Street, Exit 7 21 are not the right answer. Exit 9 is the solution. Mayor Garza and the Judge have 23 assured us that together we can work through these 24 issues -- and, Senator, we're banking on your 25 support. Page 30 I believe that we can make it

2 happen. If we do, we don't have opponent, 3 proponent, win, lose, us and them, we have a 4 win/win, just based on the economic impact that 5 this project can bring to all the communities. With the proposed changes and 7 assurances that we have heard, as I represent the 8 people of La Marque, we will have a resolution on 9 our next agenda supporting the project and we ask 10 that you issue the permit. Thank you. COL. WATERWORTH: Thank you very 12 much, Mayor. If I could ask Nick Saum to come 14 forward. He's representing Craig Eiland. MR. SAUM: Representative Eiland 16 sends his apologies that he was not able to be here 17 in person this evening. Traveling around having a 18 different day job tends to get you in places, he's 19 stuck over in Beaumont right now in traffic. COL. WATERWORTH: Could I ask you to 21 move a little bit closer to the mic so everybody 22 can hear you. MR. SAUM: Certainly. The Texas 24 City Project is extremely important to this area. 25 It offers the opportunity to build our tax base, to

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Page 31 1 bring new and more jobs into the area. The importance that the 3 petrochemical industry that, you know, the port 4 industry plays in this area is significant, and we 5 feel that further development is the only way to 6 go. In regards to the concerns the 8 constituents have had regarding traffic especially 9 around Omega Bay and Bayou Vista, Representative 10 Eiland is pleased to see that the county and the 11 TXDOT and the cities are willing to look for a 12 viable alternative. 13 We would like to offer our support 14 if there is anything our office can do to help work 15 out these problems and resolve the situation. 16 Therefore, I would again like to reiterate our full 17 support of this program and for this application 18 and wish that -- it is our wish that you endorse 19 and issue the permit. Thank you. COL. WATERWORTH: Thank you very 21 much for your comments, We'll now proceed into the 22 open comment period. At this point, we will call forward 24 five individuals. I'd ask you to take seats 25 forward behind the podium, and we will designate 1 you to come up at the appropriate time to make your 2 comments. Please keep your comments to three 4 minutes and there will be a time-keeper off to your 5 right which will give you an indication when you 6 get to the 30-second mark. MR. DUNN: First five speakers we 8 have is Billie Moore, S. J. "Sonny" Manuel -- I'm 9 going to apologize first on this -- Pangiotis 10 Pontikas, P-o-n-t-I-k-a-s. Sorry. John Astad and 11 Bill Schotfeldt. Please come forward. 12 And the first speaker will be Billie 13 Moore. MS. MOORE: Hi, my name is Billie 15 Moore. And I want to thank Texas City for having 16 us use this beautiful facility to have this 17 meeting. And I also want to thank all of you who 18 worked so hard to get this together. A public hearing is an unusual thing

20 sometimes, but I do want to thank you for allowing

22 I'm the president of the board of 23 directors of the Galveston County Municipal Utility 24 District Number 12 in Bayou Vista and it includes 25 Omega Bay and original Bayou Vista and Bayou

21 to us speak frankly.

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1 Vista.
                                                                        PH-BM: Public Hearing-Billie Moore
       The container terminal is probably a
3 great thing for Texas City and we do support that.
                                                                        PH-BM-1: Comments noted.
4 But the devastation that it would cause if the
5 traffic is allowed to go through where it is routed
                                                            PH-BM-1
6 now, off of 45 in front of Omega Bay, and back up
                                                                        PH-BM-2: Comment noted.
7 197, it's really giving us the negative brunt of
8 Texas City's good fortune. And we're not knocking
                                                                        PH-BM-3: In regards to property values, see response to FL1-7.
9 it, we want to support the terminal. We want you
10 to give them the permit for sure.
                                                                        Section 4.2.21 (Community Infrastructure and Municipal Services) of
                                                            PH-BM-2
       We strongly oppose the route.
                                                                        the DEIS addresses potential impacts to the community, including to
       The tax base of our municipal
                                                                        local tax revenue, from the proposed project.
13 utility district is determined by the value of the
14 homes that are in our district. If this negative
15 impact goes forth and doesn't change -- and I'm so
                                                                        PH-BM-4: See response to FL1-1.
16 glad to hear about the conversations and so forth
17 that's going on now, but if that original route
18 that we've all heard about is allowed to happen,
                                                            PH-BM-3
19 who would buy, knowingly knowing that, who would
20 buy a home in that area. So the area would be
21 certainly devalued.
       And that tax base allows us to pay
23 the bonded indebtedness on our new sewer treatment
24 plant. So there's just consequences all over the
25 place.
Page 34
       We all know about projects that
2 haven't been allowed to be developed because of
3 some endangered animal or bug like the Snail
4 Darters and the Attwater Prairie Chickens. I was
5 on the Texas City Commission at the time that we
6 had planned — an airport was to be developed and
7 somebody found an Attwater Prairie Chicken.
       I'm 30 seconds away from telling you
9 that we're certainly is important as a Snail Darter
10 and an Attwater Prairie Chicken, although they're
11 great. And we really are just respectfully
12 requesting your consideration to support the route
                                                            PH-BM-4
13 down Exit 9 so it won't impact anybody. And I'd
14 ask all the governmental entities to have
15 resolutions supporting Exit 9 and I think they
16 will. Thank you.
17
       COL. WATERWORTH: Thank you very
18 much.
19
       MR. DUNN: Sonnie Manuel.
       MR. MANUEL: Colonel Waterworth and
21 your associates, thank you for allowing me the
22 time. Let me say this: I support the Shoal Point
23 Container Terminal. However, I do not believe that
                                                                        PH-SJM: Public Hearing-S.J. Manuel
24 one city should cause problems for its surrounding
25 neighbors.
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                                                                  J-196
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Texas City Mayor Carlos Garza in the local newspaper Friday, January 25, 2002, stated that the concerns raised by Omega Bay and Bayou Vista residents about increased traffic from the proposed Shoal Point Container Terminal should be addressed.

7 What comes with the traffic, also 8 causes pollution and more noise. Omega Bay and 9 Bayou Vista residents have always had the traffic 10 on its feeder road to Houston and Texas City. 11 These trucks using the above route

12 would not only create more traffic, it could also 13 cause damage to the overpasses that they travel 14 under on 1-45.

15 If just one truck should be carrying 16 a load too tall to go under these overpasses, it 17 will cause a lot of damage.

Omega Bay and Bayou Vista residents
have always had to endure flooded roads going to
Houston and Texas City because of the low area they
have to travel.

I believe I have an answer to the 23 concerns: An overpass that would be built over the 24 northbound traffic traveling to Houston and La 25 Marque as alternate route for the trucks traveling

Page 36

1 down 1-45, just like the overpass that travels off 2 of Highway 3 and 146 going north towards Texas 3 City. This overpass could cross over at a 4 45—degree angle across the old Sunflower Trailer 5 Park and the end of the Montco Landfill and come 6 out on 146 and Loop 197. This would divert the 7 traffic from the Omega Bay exist.

8 This same overpass could be built 9 wide enough to handle the northbound traffic out of 10 Texas City in the south end of La Marque and on to 11 Houston.

This property could be purchased by
the state and if the price of the land is not
reasonable, the state could buy it under the
eminent domain clause, that gives that person that
owns the property the fair market value for the
land.

When I was on the La Marque city
19 counsel, it was brought out to our attention that
20 there was going to be a truck stop in La Marque
21 between 1-45 and Highway 519 to service these
22 trucks and would supply them with parts if any of
23 the repairs were needed. This road was to cross
24 the end of the golf course and exit on to 519 by
25 the VFW Hall.
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PH-SJM-1

Page 37 La Marque does not need the 2 additional traffic or pollution. We have enough 3 problems with the 18-wheelers that we now have 4 driving through our city. If Texas City is to gain from this 6 revenue, they should bear responsibility for the 7 upkeep of the roads and traffic jams. Omega Bay is part of La Marque. 9 They are considered a small bedroom community like 10 the rest of La Marque and let's keep it that way. COL. WATERWORTH: Sir, that 12 concludes your time. 13 MR. MANUEL: Sir? COL. WATERWORTH: Sir, you're out of 15 time. Can you conclude your remarks very quickly? MR. MANUEL: I just have a short 17 statement to finish if you would let me, please. COL. WATERWORTH: Please. MR. MANUEL: I'm speaking on behalf 20 of all Galveston County citizens for their health 21 and safety. A truck stop like I mentioned is now 23 in perfect location in the south end of Highway 24 146. Let the City of Texas City buy the old 25 Central Freight Line property and service the

Page 38 1 trucks there. La Marque city council needs to look 3 ahead for this problem in the near future. The 4 citizens do not need or want the additional 5 problems with the trucks. There will be between 2000 and 2300 7 trucks by day traveling to Texas City terminals and 8 back. Within a 12-hour period, they average 191 an 9 hour between the hours of 7:00 a.m. and 7:00 p.m. This would not only hurt La Marque 11 Omega Bay, Bayou Vista, the traffic jams will kill 12 Galveston's tourist business, especially Dickens on 13 the Strand, Mardi Gras, spring break, the chapel 14 and other functions that Galveston may have. COL. WATERWORTH: Sir, again your 16 time is up. Thank you for your remarks. MR. MANUEL: I would hope that the 18 City of Texas City while they're building the 19 terminal will hire local labor from Galveston 20 County and not go to the outside. Thank you for 21 your time. COL. WATERWORTH: Thank you very 23 much, sir. MR. DUNN: Mr. Pontikas. And I 25 apologize again if I'm butchering your name. 440622/020135

PH-SJM-2: Comment noted.

PH-SJM-1

PH-SJM-2

Page 39 MR. PONTIKAS: My name is Pontikas, 2 and first I would like to congratulate the former 3 mayor, Mr. Doyle that he had the idea to start 4 with; and second, Mr. Carlos Garza, our mayor, for 5 finishing the job. I hope, you know, that would 6 be, you know, approved by all the authorities. But I'd like to emphasize something 8 that I read the paper and the last, you know, six 9 months, and I have read different concerns that 10 people have. Safety, traffic, pollution and 11 noise. Safety there is not a problem 13 because being a sea captain myself, you know, for a 14 long time, we have international, national, state, 15 county, city, you know, safety measures where, you 16 know, that can be solved, there is not any problem 17 on that, on the safety. The little noise that they're 19 talking still we can limit it a little bit by 20 having somebody to inspect the, you know, trucks 21 that they will come into the city that they have 22 been qualified to travel, not having so much

23 pollution, you know, some of the trucks they do, 24 and as well, you know, the traffic, where they will 25 start they will have space only for one I believe,

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1 or ship or probably two. That's going to be about 2 300 of them. The problems we start then, then, 3 then, you know, they can figure out, you know, 4 additional traffic routes and all that. So there 5 is not a problem. The problem is going to come 6 somewhere after 10, 15 years, but until then, you 7 know, we can figure out the additional problems and 8 find solutions to those. Now, the benefits, a lot of people 10 said the benefits that the state and the city would 11 have, there are more than that. Here we're talking 12 about a thousand houses, 600 houses, and 300 13 houses, that they will try to build, this is not 14 because for anything else than what it costs for 15 that. That's going to be additional income for the 16 school district as well as the cities and 17 everything else. That's another benefit that people, 19 they cannot figure out yet. I have been already 20 approached from a company up in Houston to open a 21 big warehouse, you know, for shipping, as a ships 22 handler to provide the ships with certain things 23 that they buy. All the seamen that will come I used 25 to be a seaman, I know when we would go out, we

PH-P: Public Hearing-Pontikas

PH-P-1: Comments noted. Sections 4.2.2 (Roadway Traffic Impact Analysis), 4.2.3 (Noise), and 4.2.20 (Socioeconomics) of the FEIS address potential traffic safety, noise, and economic impacts related to the proposed project.

PH-P-1

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1 would spend money everywhere.
       So I figure, you know, that it is
3 time, you know, just to approve that and still I
4 would like to, you know, just congratulate the
5 people that they had the idea and they're finishing
6 the job right now. Thank you.
       COL. WATERWORTH: Thank you very
8 much, sir.
       MR. DUNN: John Astad.
       MR. ASTAD: Howdy. This is John
11 Astad. Thank you for coming down here, Colonel,
12 and everyone, and letting the public opportunity to
13 give our view points.
       My name is John Astad. I'm a
15 resident of Santa Fe, Galveston County, also
16 another seafarer. All I ask for is a tall ship and
17 a star to steer her by.
       But what we are talking about the
19 port here, it's -- the potential port, it's an
20 exciting time here for Texas. It really is.
       It's a lot of opportunity for the
22 whole region here and, you know, as a mariner, it's
23 more jobs for seafarers, more jobs for ships
24 captains, more jobs for the whole industry.
       But more particularly, I'm seeing
Page 42
1 it's an opportunity regionally for the area and
2 also for the state.
       When you are reviewing this
4 application, I would also like you-all to take a
5 look at the potential, the benefits to our national
6 security and economic vitality of our nation.
       These times that are coming, it's
8 real important that our nation have a strong
9 merchant marine, and when times of national
10 defense, a sea container port will be very
11 beneficial. The sea containers, we have military
12 sea-lift command ships, we depend on container
13 ports, where we can load out.
       And Texas City being where it's at,
15 it's really close to the Gulf of Mexico, so it
16 provides an easy out and an easy in for ships.
       So you know, when you are looking at
18 the application, a lot of the speakers have been
19 speaking about regional positive aspects but we
20 also, what's really exciting, we're talking about
21 national and global issues, especially when we're
22 talking about the economic security and vitality of
23 our nation.
       When we look at the Pacific rim
25 countries and also trade in Latin America, it just
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PH-JA: Public Hearing-John Astad

PH-JA-1: Comments noted. Section 4.2.20.7 (Household Income Effects) of the DEIS discusses potential direct and indirect impacts to average household income from construction and operation of the proposed project.

PH-JA-2: Comments noted. See Section 3.20.4.4 of the FIES for details on port security.

PH-JA-1

PH-JA-2

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1 is great for the whole nation for economics.
       And I know you look at these issues,
3 too, and being with the Corps of Engineers, Army,
4 about the defense aspect, you're well aware of it.
5 But as a local here in Santa Fe, I just, you know,
6 would like to put my input and I'm all for the port
7 also.
       I agree with all the other prior
9 speakers, how it's really important to have an
10 alternate route, like Exit 9, I'm not very familiar
11 with the area, but we have to look at all the
12 issues and I'm all for Exit 9 also so it doesn't
13 impact the other aspects of the neighborhood.
       I know in the future a lot of people
15 who are concerned about environmental issues and
16 with new technologies coming in the nation now and
17 opportunities, there will be alternative fuels and
18 alternative emission standards. Right now we have
19 diesel trucks, we're talking about a lot of
20 precursors for ozone, like sulfur dioxide and
21 nitrous oxide, but I think everyone should, you
22 know, any opponents of the port should look in the
23 future, we are having new technologies for
24 alternative fuel and it doesn't have to be diesel
25 fuel. I think in the future, we'll have
Page 44
1 alternative fuels and it wouldn't impact the
2 communities.
        COL. WATERWORTH: Excuse me, your
4 time is up. Could you please conclude your
5 remarks?
       MR. ASTAD: All right. I'll
7 conclude it. Like I said, if we look at the
8 environmental issues and the defense issues of the
9 nation and the economic security of the nation, we,
10 all stakeholders work together, I believe this port
11 is a good issue at this time. I thank you for
12 giving me a chance to speak.
13
       COL. WATERWORTH: Thank you very
14 much.
15
       MR. DUNN: Bill Schotfeldt.
       MR. SHOTFELDT: Bill Schotfeldt. I
17 appreciate the opportunity to be here this evening
18 along with the other people. I'm a resident of
19 Bayou Vista and I'm -- I'm going to say a real
20 estate investor. We own a number of homes there.
21 A lot of our people work in Houston. A lot of them
22 work in NASA. And the travel back and forth will
23 be a real problem if we put all those trucks down
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And we've heard all the facts about

24 there.

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PH-JA-3: See response to FL1-1.

PH-JA-4: Responses to EPA-1, EPA-2, and EPA-5 address the use of equipment and best management practices to reduce potential impacts to air quality.

PH-JA-3

PH-JA-4

PH-BS-1: Public Hearing-Bill Schotfeldt

PH-BS-1: As discussed in Section 4.2.19 of the DEIS, the predominant impacts on traffic loads on IH 45 would be caused by regional growth, with some additional impact, primarily in the form of truck traffic from the proposed project. Some improvements will be needed to accommodate projected traffic volumes, with or without the project, to maintain an acceptable level of service.

As described in Section 4.2.2.6 of the DEIS, TxDOT has future plans to widen the IH 45 main lanes and redesign the IH 45, SH 6 and SH 3 interchange. These improvements may take the container traffic over or under IH 45, thereby lessening the container traffic impact on the IH 45 frontage road.

PH-BS-1

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PH-BS-2: See response to FL1-1.
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7 life-style and we've got a very nice one. And a 8 lot of us trade in Texas City as Mayor Garza 9 knows. I don't know what Kroger's would do if the 10 people at Bayou Vista and Omega Bay couldn't get 11 her. You know, we're that type of community. So we do have a lot of interest in 13 this. I don't think there's anyone here tonight 14 who's against the project. I think the whole 15 thing, and I don't want to take up a lot of your 16 time, you've heard everybody say the same thing, 17 it's that darn road. So if we can get that road 18 moved and everybody will approve it, I think you'll 19 have a very happy group of people here. Thank you 20 for the opportunity. COL. WATERWORTH: Thank you very 22 much, sir. MR. LUMEN: Okay, we are going to 24 call five more. Alistair MacNab, Jose Hernandez, 25 Ricky - or Rick Solis, Sr., Bill Jackson and Lissa Page 46 1 Evans-Cooper. MR. MACNAB: Good evening, 3 gentlemen, Alistair MacNab -- can you hear me all 4 right? Alistair MacNab, president of the Greater 5 Houston Port Bureau. I feel a little bit out of place 7 here, because, of course, I'm not a citizen of 8 Texas City nor indeed do I -- am I terribly 9 familiar with the community here. I would however commend Mayor Garza 11 for all the good work he's done in creating this 12 program and supporting the project for Shoals 13 Island. I'm here tonight, though, to 15 represent the cargo. The reason for the port, of 16 course, is trade and commerce. A port in itself is 17 of no value to anybody without ships coming and 18 going, and ships coming and going have no value 19 either without cargo to import or export.

20 Fifty percent of the cargo that is 21 destined for or originates in this area ends up in 22 Houston, Harris County. And unfortunately, it has 23 to get there by road because the ships can't get to

24 every warehouse in town.

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So the best solution to

Page 45

PH-BS-2

Page 47 PH-AM-1: Public Hearing-Alister MacNab 1 transportation problems on the land side must PH-AM-1 2 surely be to get the deep-sea ships as close to PH-AM-1: Comment noted. 3 their marketplace as possible. To me, if we find ourselves 5 discharging large numbers of containers here in PH-AM-2: Comments noted. 6 Texas City, moving the containers up 146 or along 7 225 or over 1-10 just seems to me that we're PH-AM-2 PH-AM-3: Comments noted. 8 impacting on far, far too many bedroom communities 9 than strictly necessary. I do see that according to the PH-AM-4: Comment noted. The purpose of this EIS is to present 11 numbers at the back, that about 30 percent of the information to decision-makers and the public regarding potential 12 proposed traffic would go in that direction. I impacts from alternatives that meet the purpose and need for the 13 think the citizens to the north of Texas City would PH-AM-3 14 find that objectionable. project, as defined in Section 1.2 of the DEIS. The Bayport Certainly to even consider that the alternative is presented in the EIS as a possible alternative. 16 containers would go out to 45 and then come back in However, the Shoal Point alternative is the applicant's proposed 17 again is just not going to work. alternative. The problem with the Bayport 19 terminal -- and I wish it well, I would just like 20 to think that we will have the opportunity of This NEPA process was triggered by a Section 404 permit 21 creating numerous container terminals in Galveston application to the Corps. The Corps responds to these permit 22 Bay as time goes on, but I think that the Army 23 Corps of Engineers has got a major problem, and applications as they are submitted and each is addressed 24 that is to build one terminal or to build more than PH-AM-4 separately. At this time, there is no plan for a cumulative approach 25 one terminal, or build none at all. It's quite a to these facilities. Cumulative impacts, including the Port of Houston Authority's proposed Bayport Container Terminal (an action separate from the proposed Shoal Point facility), were evaluated in Section 4.8 Page 48 of the DEIS. 1 difficult decision that you have in front of you. My view is that Texas City is a good PH-AM-5: Comment noted. 3 idea, but it's not the best idea for Galveston Bay 4 at this time. Thank you very much. MR. LUMEN: Jose Hernandez. MR. HERNANDEZ: I just wanted to say 7 that congratulations to the City of Texas City for 8 this project. I think it's a good idea. PH-JH: Public Hearing-Jose Hernandez 9 Unfortunately it's not a good idea for the 10 residents Omega Bay and La Marque. PH-JH-1: Comment noted. See response to FL1-8 for more You heard all the other excuses why 11 information regarding emergency access. 12 this is so, but I want to tell you one more 13 excuse. If the truck line gets in front of the 14 entrance or exit of Omega Bay, if it blocks it, it PH-JH-2: Comment noted. See response to FL1-1 regarding on-15 becomes deadly for us. I mean, it could happen. going discussions about an alternative route. The reason is that we have a heart 17 attack, fire and another emergencies and we dial 18 911, our support city, which is La Marque, 19 decides -- the emergency vehicle decides to come PH-JH-1 20 down 1-45, Exit 7 and finds they can't get into 21 Omega Bay, this is what I mean that it becomes 22 deadly for us. So I would like to ask the Corps not PH-JH-2 24 to issue the permit until the originators of this 25 project come up with an alternate route for these 440622/020135 J-203

Page 49 1 trucks. Thank you. COL. WATERWORTH: Thank you very 3 much, sir. MR. LUMEN: Bill Jackson. MR. JACKSON: Colonel, gentlemen. 6 I'm Bill Jackson, alderman with the city of Bayou 7 Vista. Most of everything I was going to say has 8 been discussed. We had our -- the biggest concerns 9 we had in Bayou Vista, of course, was the truck 10 traffic. We support the building of the port. It 11 would be very good for Galveston County and the 12 surrounding communities. But in looking at the DEIS and 13 14 looking at the road traffic analysis and subsequent 15 data in there, we found all kinds of tables with 16 all kinds of problems with the tables. And the 17 data that was presented. There's no discussion or 18 data really presented on the 2005, 2015, 100 19 percent truck traffic coming out of the port 20 because the intermodal railroads are not going to 21 be built until 2023 or 2025. After analyzing it, just taking the 23 date out of the draft BIS, the reasons the Bayou 24 Vista citizens and Omega Bay and surrounding area 25 get extremely concerned and opposed to the proposed Page 50 1 traffic routes, was that in 2005, we approximately 2 had about 1005 trucks coming down Exit 7, 12 hours 3 a day, seven days a week. That's 366,800 trucks a 4 year. And around 2015, we had about 1676 trucks 5 coming down that little Exit 7, turning left trying 6 to go over to 197 which is approximately 611,700 7 700 trucks a year. And there's just no way Exit 7 and 9 our surrounding community can survive that amount 10 of environmental and human environment degradation 11 because our human environment would be so degraded 12 from air and noise pollution, from congestion, 13 we're going to have wrecks, we're going to have 14 fatalities, we're going to have truck breakdowns, 15 it will be a nightmare, and that's seven days a 16 week, 52 weeks a year. So at the gracious wishes of Mayor 18 Garza, we met over here, and Judge Yarbrough and 19 other mayors of the cities and we sat down and we 20 came up with a solution that is not in the draft 21 ElS that we feel should have been in the draft HIS 22 at least in the mitigation section about even 23 though a road may not be built, a road can be 24 proposed to be built to alleviate environmental and 25 human environment degradation. 440622/020135

PH-BJ: Public Hearing-Bill Jackson

PH-BJ-1: Prior to construction of a new intermodal facility, cargo to be transported by train would be hauled from the terminal to an existing railyard by truck.

PH-BJ-2: Comments noted. Please see responses to VBV-1, SC-2, VBV-4, and FL1-5.

PH-BJ-1

PH-BJ-2

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       And so the route, the Exit 9 shunt
2 which is about four-tenths of a mile over to 146 is
3a doable alternative mitigation solution that we
4 support 100 percent.
       And without it, then we have to
6 oppose the truck traffic getting to the port. But
7 with it, we support the port facility and say go
8 ahead and issue the permit. Thank you.
       COL. WATERWORTH: Thank you very
10 much.
       MR. LUMEN: Okay. Lissa
12 Evans-Cooper. She's not here.
       Okay, next five speakers, Russell
14 Kiesling, Rusty Swafford, Evangeline Whorton,
15 Stephen Holmes, Carl Sullivan. And Russell
16 Kiesling will be the first speaker.
       MR. KIESLING: Good evening,
18 Colonel. My name is Russell Kiesling and I'm on
19 the board of directors of Galveston County MUD
20 Number 12 and I also serve on the board of
21 directors of the Omega Bay Improvement Committee;
22 as such, I'm going to be double dipping tonight
23 because I think I represent residents from both of
24 those communities.
       And if you'd indulge me, how many
Page 52
1 people here are from Omega Bay or Bayou Vista or
2 Bayou Vista, raise your hands, please. I didn't
3 count them all but let the record show there are a
4 lot of us here tonight and I think that's good
5 because it really does highlight the kind of
6 concern that we, as citizens, have had for this
7 project.
       Under the beat-the-dead-horse topic,
9 I won't really go over the traffic issues, we all
10 know that's the fundamental issue here tonight.
11 We've brought it up since the very first scoping
12 meetings and we're very pleased with the
13 discussions that our local elected officials have
14 had here in the last few months or last few days as
15 far as looking at the alternative along Exit 9. We
16 think that's the solution and we certainly
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17 encourage them to go forward with that.

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The problem that remains for me is
we don't really have true assurances that the
solution is at hand; by that I mean you look at the
draft SIS and it's got its traffic analysis in
there, our alternate route, although we suggested
during the scoping process, it's not in that
document now. I feel it's real important that some
analysis be conducted, it be included as a -- a

PH-BJ-3: Comment noted. See response to FL1-1.

PH-BJ-3

PH-RK: Public Hearing-Russell Kiesling

PH-RK-1 & 2: Comments noted. Please see response to FL1-1.

PH-RK-1

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1 true alternate route in the draft or in the final
2 environmental impact statement.
       And, if possible, it would be really
4 nice if the project sponsors would go ahead and
5 just list that as part of the project footprint so
6 it would become part of the permitted project; that
7 way the mitigation issues associated with it can
8 all be dealt with in one permit process. I think
9 that would be more efficient for the Corps process
11
       So again, I want to express my great
12 appreciation to our elected officials. I think
13 they really done us a good service by listening to
14 us, by bringing our concerns and our ideas
15 forward.
       And with that, I'll just end the
17 rest of my time so we can get out of here early.
18 Thank you.
       COL. WATERWORTH: Thank you very
20 much.
21
       MR. LUMEN: Rusty Swafford.
       MR. SWAFFORD: Good evening,
23 Colonel. I'm Rusty Swafford and I'm a resident of
24 Bayou Vista and I'm not going to rehash all of the
25 complaints that everybody else — it's pretty
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Page 54 1 obvious what the problem is. I do want to applaud the efforts of 3 our elected officials to try to address this 4 situation. However, the comments that you're 5 looking for tonight are on the draft environmental 6 impact statement itself and, you know, I'd like to 7 address what I believe to be numerous inadequacies 8 and inconsistencies in the traffic impact analysis 9 and I really believe it needs to be re-looked at 10 for the final impact -- environmental impact 11 statement. NEPA requires an in-depth analysis 13 of the effect of the project on the human 14 environment. It also requires the action agency in 15 which, in this case, is the Corps of Engineers, to 16 assess the direct, secondary and cumulative impacts 17 of this project on the human environment to 18 evaluate alternatives to the project and to 19 investigate any mitigation options to those 20 impacts. I don't believe that that has been 22 done. You know, most of the analysis looking at it 23 comes out with no impacts primarily because when 24 you look at the traffic analysis, it's all of the 25 modeling that was done was on the assumption of in 440622/020135

PH-RK-2

PH-RS: Public Hearing-Rusty Swafford

PH-RS-1: See responses to RS-6, RS-8, and RS-24.

PH-RS-1

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PH-RS-2: Comments noted.
1 2025 and 80 percent of the containers will be going
2 by truck, 20 percent by train and then all the
3 traffic patterns for the trucks are based on 42
4 percent of those trucks going on 1-45, and 28
5 percent going 146 and then the rest going other
6 routes, that was the only numbers that were put
7 into the modeling efforts that was put into the
9
       Apparently there was a traffic
10 analysis done by PBS&J, the port's engineering
11 firm; however, you know, what happens if there's 80
12 percent of that traffic going on the frontage road
13 or up 1-45, none of the air -- your air, noise,
14 safety, traffic patterns were all based on those
                                                                PH-RS-2
15 model inputs.
       And as anybody familiar with
17 modeling knows, you know, garbage in-garbage out.
18 So I think that, you know, the analysis of the
19 traffic impacts in the draft environmental impact
20 statement are inadequate and insufficient and
21 should be re-looked at for the final EIS.
       Additionally, weaving analysis, I
                                                                PH-RS-3
23 couldn't -- although I haven't had time to look
24 totally at it, I could not find any analysis of
25 what happens -- already? Okay, I'll just leave it
Page 56
1 at that. I will follow up with a letter to --
       COL. WATERWORTH: If you would,
3 please, get it in the original --
       MR. SWAFFORD: Because there are
5 numerous things.
       COL. WATERWORTH: Thank you very
7 much.
       MR. LUMEN: Evangeline Whorton.
       MS. WHORTON: I would like those
10 from my organization Scenic Galveston that are here
11 to please stand. Thank you.
       I'm Evangeline Whorton, Chairman of
13 Scenic Galveston, a grass-roots community-based
14 scenic and conservation organization founded in
15 1992.
16
       Scenic Galveston owns 900 wetland
17 acres along Interstate 45, south of the Texas City
18 interchange, more than five plus linear miles of
19 highway frontage and two plus miles of Bay
20 shoreline.
       We speak tonight as a major
                                                              PH-EW-1
22 stakeholder in this important decision of
23 permitting Shoal Point Container Terminal.
       In mid-2001, Scenic Galveston had a
25 very productive meeting with Texas City Mayor Garza
440622/020135
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PH-RS-3: See response to PLR-2 through PLR-5.

PH-EW: Public Hearing-Evangeline Whorton

PH-EW-1: Statement also submitted as letter from Scenic Galveston. Inc. See responses to SGI2-1 to SGI2-7.

Page 57 1 about our eminent purchase now funded of Virginia 2 Point, to expand our preserve and buffer it from 3 ancillary port business. At that time, we felt that most of 5 our potential objections to the project would be 6 alleviated and we've been quiet to date. In principal, we are not opposed to 8 a container terminal at Shoal Point, but it appears 9 that most of the wider environmental concerns we 10 have have not been investigated by this DEIS. The terminal will result in 12 irreversible traffic problems with thousands of 13 18-wheel diesel trucks along and adjacent to the 14 Texas City interchange, Interstate 45 and Highway 15 146 juncture at the northern flagshap end of our 16 habitat conservation preserve. The number of 17 diesel trucks, as already been discussed tonight, 18 by 2025 have been calculated to be more than 10,300 19 per day. Now, Texas City -- excuse me -21 TXDOT has promised to build a new Texas City 22 interchange by 2010. The northern end of Scenic 23 Galveston's preserve lost many hundreds of feet 24 taken by eminent domain in recent work completed on 25 the interchange. Page 58 1 Will the 2010 interchange create 2 flyovers and cloverleaf elevations above our scenic 3 wetlands corridor and over Bayou Vista and Omega 4 Bay residences. While we recognize the economic 6 importance of the project to our neighbor Texas 7 City, at this time it appears that money-driven 8 projects usurping the Bay take precedence in 9 Texas. Bayport and the recent HFA - excuse 11 me -- HPA attempted takeover of the Galveston 12 Wharves and Shoal Point seem favored over the 13 health and welfare of nearby residents, the coastal 14 marshes essential as nursery and habitat for marine 15 and avian species, the well-being of Galveston Bay, 16 air quality, recreational and commercial fisherman, 17 recreational boaters and other diverse users of the 18 Bay. October 2000 at scoping hearings, 20 Scenic Galveston addressed concerns about truck 21 traffic, air pollution, wetlands impacts, water

22 salinity and dredge material plans.

25 groups still having reservations.

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After reviewing this DEIS, we join ther area conservation organizations and citizen

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Page 59
       Scenic Galveston was to participate
2 in the comprehensive dredge management plan.
3 Scenic Galveston today has not been asked to
4 participate in any planning sessions. Where our
5 concerns might have been allayed, they now have
6 been heightened.
       COL. WATERWORTH: Ma'am, can you
8 finish up your --
       MS. WHORTON: Yes, I will. Every
10 parcel in the marsh, between Bayou Vista and Santa
11 Fe Scenic that Galveston owns, carries a
12 conservation easement with the U.S. Fish and
13 Wildlife Service, restricting it for non-intrusive
14 public use and parkland for habitat conservation.
       Our organization has worked
16 fervently for the good of citizens, marine, bird
17 and wildlife raising $4.6 million to acquire,
18 protect and restore the estuary.
       COL. WATERWORTH: Ma'am, once
20 again, can you --
       MS. WHORTON: One last paragraph.
22
       COL. WATERWORTH: Okay.
       MS. WHORTON: One of our agency
24 oversight partners yesterday advised us that
25 facilities of such magnitude placed anywhere in the
Page 60
1 Bay should not be permitted until three-dimensional
2 hydrodynamic modeling studies of the whole
3 Galveston Bay are performed to evaluate impacts
4 such as salinity intrusion and dredge spoil
5 disposal waters to the Bay.
       COL. WATERWORTH: Thank you very
7 much, ma'am.
       MS. WHORTON: Such studies have
9 never been done. This DEIS, when presented,
10 perhaps in the future our questions won't have to
11 be unanswered. Thank you.
12
       COL. WATERWORTH: Thank you, ma'am.
13
       MR. LUMEN: Stephen Holmes.
       MR. HOLMES: Thank you and good
15 evening, Colonel. I'm Galveston County
16 Commissioner of Precinct 3 and I just rise to say a
17 couple of things.
       First of all, I'd like to commend
19 former Mayor Doyle as well as the current Mayor
20 Garza for their openness and the public meetings
21 and their workshops that have kept the public
22 informed about every step of the process in regards
23 to Shoal Point.
       Secondly, I would offer my support
25 to them in regards to the fact that they have
440622/020135
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PH-SH: Public Hearing-Stephen Holmes

PH-SH-1 – 3: Comments noted.

PH-SH-1

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Page 61
1 addressed many of the concerns of many of the
2 citizens here of which many I represent. They have
3 addressed issues in regards to local labor, the
4 different issues in regards to the municipalities,
5 the different issues in regards to the users and a
6 lot of the environmental issues.
       And they are currently obviously
8 entertaining the issues in regards to -- as it
9 relates to the mobility of the truck traffic and
10 Mayor Garza has shown his openness to work with
11 that issue by meeting with our county judge.
       The county judge had then set up a
13 meeting with the Commissioner's court and the Texas
14 Department of Transportation to try and address
15 those issues.
       And lastly, I would offer my support
17 once again to the City of Texas City for their
18 permit request. Thank you, Colonel.
       COL. WATERWORTH: Thank you very
20 much.
       MR. DUNN: Carl Sullivan.
22 Mr. Sullivan?
       MR. LUMEN: Matt Woodruff, Ellyn
24 Roof, Chuck Doyle, Laurence Tobin and Jimmy
25 Hayley. Okay, Matt.
Page 62
       MR. WOODRUFF: Colonel, my name is
2 Matt Woodruff and I am the chairman of Board of
3 Trustees of the Galveston Bay Foundation. Our
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4 executive director, Linda Sheef, who's normally our 5 spokesman is having a few days of well deserved 6 vacation so I'll try stand in her place and tell 7 you a little bit about the position of the 8 Galveston Bay Foundation with respect to this 9 proposed facility. First of all, for those in the 11 audience who may not be familiar with who the 12 Galveston Bay Foundation is, our mission is to 13 protect, preserve and enhance the Galveston Bay 14 system for its present users and for posterity, and 15 we seek to bring together all the different user 16 groups of the Bay, including recreational and 17 commercial fisherman, navigational users, 18 industrial users, people who just like to look at 19 it and the birds and the other things that the Bay 20 has to offer. And we strive to be inclusive in our 21 representation. We have long been, and continue to 23 be, a supporter of sustainable development. But in 24 order to ensure that we have sustainable 25 development, we think that we need a balanced

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PH-SH-2

PH-SH-3

Page 63 1 approach to the way that we look at the Bay and 2 projects affecting the Bay. And one of the things that we think 4 is essential to that end is regional port 5 planning. Now, I know that that's an issue 6 probably more for Senator Jackson, who left a few 7 minutes ago, than for the Corps of Engineers but 8 that is one of our concerns is that there are more 9 than one proposal on the table affecting Galveston 10 Bay and that we should look at the entire Bay 11 ecosystem and what its needs are and balance the 12 container port needs against the system as a whole 13 rather than looking at two projects independently. Others who have spoken to you this 15 evening have focused on certain landward impacts 16 and how this facility might affect them and their 17 families and the place where they live, and what we 18 would urge you to do is also consider the impacts 19 on the other side of the waterline and consider the 20 impacts on the inhabitants of the Bay who don't 21 have a voice and can't come here and speak for 22 themselves this evening. Because in order for us to have the 24 economic development that we all want, we have to 25 have a good place to live; and in order for us to Page 64 1 have a good place to live, we need a healthy

2 Galveston Bay and the different creatures that 3 inhabit that Bay each play a part towards producing 4 the kind of area where we want to live. I'm sure even Hardheads have a use 6 somewhere, I haven't figured it out yet, but we 7 want to ensure that this project does not have 8 adverse Bay impacts. And there are some things 9 that concern us with respect to it. And as we continue to review the 11 environmental impact statement, there are some 12 things that we are focusing on, you've heard a 13 little bit about one of them already, that's the 14 salinity impacts, what effects additional dredging 15 will have and widening and deepening of the Texas 16 City Channel on the salinity of the Galveston Bay 17 system. We're concerned about point source 19 and non-point source emissions. We're concerned 20 also about wetlands impacts. We're concerned about 21 the mitigation plan. And what we would ask that 22 you do as you approach your obligation and your 23 duty towards the preparation of this statement is 24 ensure that you look out for the interest of the 25 Bay and ensure that the health of the Bay is not

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PH-MW: Public Hearing-Matt Woodruff

PH-MW-1: This NEPA process was triggered by a Section 10 and 404 permit application to the Corps. The Corps responds to these permit applications as they are submitted and each is addressed separately. At this time, there is no plan for a cumulative approach to these facilities. Cumulative impacts, including the proposed Port of Houston Authority's Bayport Container Terminal (an action separate from the proposed Shoal Point facility), were evaluated in Section 4.8 of the DEIS.

PH-MW-2

PH-MW-1

PH-MW-2: Comments noted. Potential impacts from the Shoal Point alternative on wildlife are addressed in Section 4.2.12 (Vegetation), Section 4.2.13 (Section 404/Section 10 Jurisdictional Areas), Section 4.2.14 (Terrestrial Wildlife), 4.2.15 (Aquatic Ecology), and 4.2.16 (Endangered and Threatened Species).

PH-MW-3: In response to comments, Section 4.2.10.6 of the FEIS has been added to address potential circulation and salinity effects.

PH-MW-4: See responses to SC-2, TNRCC1-6, EPA-72, and GBF1-6. Potential impacts to wetland habitat were avoided and minimized wherever possible. See responses to FWS1-1 through FWS1-4 as examples. State and federal agencies have been involved in the preparation of wetland mitigation plans and plans for beneficial uses of dredged material. See response to GBF1-21.

PH-MW-5: Comment noted.

PH-MW-3

PH-MW-4

PH-MW-5

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1 adversely affected by this project. Thank you,
2 Colonel.
       COL. WATERWORTH: Thank you very
4 much, Matt.
       MR. LUMEN: Okay, Ms. Roof, Ellyn.
       MR. ROOF: In my next life I'm going
7 to be 6'2". I just wanted to remind you again,
8 it's going to be a broken record, not really a
9 single issue, but I am still hoping that we can
10 have the -- a study on the effects of the ship
11 wakes and what they do to the shoreline erosion and
12 to the safety of small craft in Galveston Bay,
13 still looking for it. And that's a lot -- Matt had
14 a lot of what I was interested in, too.
       COL. WATERWORTH: Thank you very
16 much.
17
       MR. LUMEN: Chuck Doyle.
       MR. DOYLE: I'm Chuck Doyle and I
19 join my successor Mayor Carlos Garza and welcome
20 you, Colonel Waterworth and all of the Bayou Vista
21 folks and people from surrounding areas to this all
22 American city and giving me the opportunity to
23 address the draft that you have before us here this
24 evening.
       I was Mayor from 1990 to 2000 and
Page 66
1 this city grew over 20 percent, almost 21 percent
2 in its industrial area during that period of time
3 and we represent 97.8 percent of industrial area of
4 this county. We're a working man's dream. We
5 provide jobs, which they need desperately here in
6 the city.
       And one of the things that's our
8 best kept secret is our port. It's an excellent
9 run port by the Texas City Terminal Railway. It's
10 number four in the state, number 8 in the nation
11 and we hope to make it even larger with this
12 project.
       There are a lot of concerns
14 expressed here tonight and I have sympathy for all
15 of them. I am a member of the Sports
16 Conservationists of Texas, Ducks Unlimited, Sierra
17 Club, Audubon Society, Nature Conservancy and
18 Galveston Bay Foundation; also gave the first
19 property to the enhancement of the corridor to the
20 group Scenic Galveston that was here tonight.
       Texas City has a heart for the
22 environment. Our vision 2000, the core of it, was
23 the environment. We cleaned up our sewage system
24 with a bond issue that the citizens endorsed. We
25 expanded our wildlife preserve with Texas Nature
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PH-ER: Public Hearing-Ellyn Roof

PH-ER-1: Plans to armor the shoreline of Shoal Point and to maximize the distance of the proposed turning basin from nearby docks should minimize the potential for shoreline erosion due to ship washes.

PH-ER-2: See response to EPA-25 regarding potential effects of small commercial and recreational vessel traffic.

PH-CD: Public Hearing-Chuck Doyle

PH-CD-1

PHCD-1: Comments noted.

PH-ER-1

PH-ER-2

Page 67 1 Conservancy over 2000 acres to protect Attwater 2 Prairie Chicken. We also have the Thomas S. Mackey 3 Nature Conservancy here in the city and we have a 4 lady who works very hard, Trudy Belz, making the 5 finest butter fly garden as well as a hummingbird 6 garden. We really have worked on superfund 8 sites and cleaned those up. TXDOT, TXDOT has 9 worked with us on enhancement of our gateways, nine 10 of them. And also we, Texas City, did the Texas 11 City Wye beautification for Bayou Vista and the 12 areas surrounding it. 1.3 We took the initiative on that, we 14 took the initiative, Texas City. I can assure you 15 this city and its citizens with the pride we have 16 will address, as Mark Twain said, Most of the 17 problems I had in this life I never really 18 experienced because they didn't happen. Where 19 there's a will, there's a way. Our mayor has met with the other 21 mayors, we're going to address this traffic issue 22 that impacts the most important group and that's 23 the citizens that live in Omega Bay and Bayou 24 Vista. They're the closest to this problem that 25 will be created by the traffic. Page 68 But I know that we have a good 2 operator, a good partner with SSA and also 3 Americana Ships and I endorse your approval final 4 draft as you have presented it here tonight. Thank 5 you very much, Colonel. 6 COL. WATERWORTH: Thank you very 7 much. MR. LUMEN: Laurence Tobin. MR. TOBIN: It's always hard to 10 follow Mayor Doyle, I think he said almost 11 everything I can say. I'm Laurence W. Tobin, I'm a council 13 member from Taylor Lake Village. Our mayor is not 14 able to be here tonight, she's got probably the 15 same croup that I've caught. But Colonel Waterworth, Mayor Garza, 17 Judge Yarbrough, I guess you're gone, I know that 18 you've been doing a wonderful job in pulling

19 together and solving the problems of the

Because other than the

21 project.

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20 transportations issues relating to this particular

23 transportation, which I think you're going to 24 solve, I believe that this particular facility has

25 optimum siting for Galveston Bay. It's close to

PH-LT: Public Hearing-Laurence Tobin

PH-LT-1: Comments noted.

PH-LT-1 J-213

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2 quickly.
       And what I like most, we're really
4 talking about a region, not just Houston, Houston
5 tends to forget that there is another part of this
6 area, it's a whole region and a region-wide
7 commerce.
       And what I think is most remarkable,
9 it is being done with private capital, we're not
10 using public funds and we're solving problems in
11 the American way. This is what the American city
12 brings to us.
13
       I also wish to compliment Alex
14 Partnum of SSA for bringing together a good team to
15 bring this project together. I feel that we have
16 the optimum site for a container facility at the
17 Shoal Point. I feel that we have a location that
18 provides adequate security. It's a site that does
19 not put neighborhoods at risk.
       It is an industrial location, not
21 like other locations. And this is a permit that
22 should be issued. Thank you.
       COL. WATERWORTH: Thank you very
24 much.
       MR. LUMEN: Jimmy Hayley.
Page 70
       MR. HAYLEY: Hello. I'm Jimmy
2 Hayley and I'm president of the Texas City and
3 La Marque Chamber of Commerce and not many Chamber
4 of Commerce presidents have the opportunity that we
5 face in our area today to say that we are working
6 diligently to help bring another industry to
7 Galveston County.
       This will be a very favorable and
9 positive one. We already have, as Mayor Doyle had
10 mentioned, two companies together, we have a
11 private company in the port of Texas City, they do
12 pay their taxes just like SSA will pay taxes, too.
       And this is again private money that
14 will be put into this. They will also pay taxes.
       But the best of all, they will -
       it's a great opportunity for us to create some new
17 jobs, new opportunities for other people to locate
18 into our area.
       And one of the things that the Texas
20 City Sun that was in Monday's edition was talking
21 about the high unemployment rate in Texas City
22 which is higher than the state average.
       Well, this again will help us
24 eliminate some of those and draw us closer and be
25 very competitive, I also support the collaboration
440622/020135
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1 the sea, you can move your cargos in and out very

PH-JH: Public Hearing-Jimmy Hayley

PH-JH-1: Comments noted.

PH-JH-1

1 of the Omega Bay, City of La Marque and Bayou Vista 2 and the City of Texas City to make this a workable We need to work together. And 4 5 they've shown tonight and I think the citizens of 6 Bayou Vista and Omega have shown that they're 7 interested in working and making this possible. 8 And this is a win/win situation for all of us and I 9 hope that you will approve and grant this permit. 10 Thank you. COL. WATERWORTH: Thank you very 11 12 much. MR. DUNN: The last card that I have 14 here indicating someone wanted to speak is Tony 15 Polumbo. If we happened to have missed someone who 16 registered to speak, please feel free to come 17 forward also. MR. POLUMBO: Colonel, thank you for 19 the opportunity to be here tonight. Mayor Garza, I 20 think you've done an incredible job. All the 21 citizens have worked hard on this. I have concern and the only concern 23 is again is to transportation. According to the 24 maps back there, 28 percent of the traffic will 25 come up 146. I don't know how many of you travel Page 72 1 up 146 now but that will be an awful thing. 42 2 percent will come down Interstate 45. I've not heard anything from the 4 Highway Department. Where are they really on 5 this? And the project, you've worked so hard and 6 did such a thorough job on, my concern there is why 7 hasn't this part of the project been completed so 8 that we that live in Omega Bay and Bayou Vista can 9 rest assured that we will have something specific 10 that we know that will happen as regard to 11 transportation. If any of you have taken the Exit 7 13 on the freeway there and you wanted to make that 14 U-turn right there, I promise you, even in a car, 15 it is a dangerous operation to try and move it 16 there. And they tell me, because I used to 18 be in the legislature, I spent 16 years in the 19 Texas House of Representatives, got a lot of 20 highway funds going, and they tell me that, at that 21 time, it was 9 to 1 and I was told back here it's 22 2.51 ratio car/trucks, so if you have 2000 trucks 23 over there, that's equivalent to 4,000, or 24 whatever, 5,000 vehicles. And please don't let any comment 440622/020135

PH-TP: Public Hearing-Tony Polumbo

PH-TP-1: Comments noted. The realignment, improvement, and maintenance of public highways are the responsibility of TxDOT. As previously noted, TxDOT has future plans to widen the IH 45 main lanes and redesign the IH 45, SH 6 and SH 3 interchange. These improvements are the responsibility of TxDOT and are not considered part of the proposed project.

PH-TP-2: Comment noted.

PH-TP-1

PH-TP-2

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Page 73
1 that I make today trying to say anything negative
2 about the proposal. We need in these economic
3 times all the growth that these people have worked
4 on.
       But when you, and I believe you will
6 approve this permit, when you do that, make sure
7 that we have a plan so that all the arteries going
8 to that are indeed covered so that the rest of
9 people won't be adversely affected by that.
       And I recommend that you do approve
11 the permit if we get a plan specific that we can
12 work on. We've got Judge Yarbrough that's doing a
13 wonderful job, he's an excellent person and I trust
14 him very much. But at this time, I would like
15 to -- I notice the absence of the Highway
16 Department. Our Governor of the State of Texas
17 tells us now that his plan is for toll roads and
18 all those kind of things around Texas because,
19 quite frankly, we're running out of money.
       I want to make sure that we do have
21 that money once this project gets there, so again
22 we said, well, we're going to get to you in a few
23 years, in the meantime we that live over there have
24 a thousand or so trucks pass by us and that's all
25 our concern is.
Page 74
       And we don't, quite frankly, need to
2 be brought into -- our dog into that hunt, that's
3 not where we want to be at all. We want to be over
4 in Omega Bay having a good time with our neighbors
5 and all that. And we just -- please let our people
6 go, as they say. Thank you very much.
       COL. WATERWORTH: Thank you very
8 much. That was our last registered speaker. Is
9 there anyone out there that we've missed or would
10 like to make comments?
       In closing, I would like to
11
12 reiterate that you can deposit written comments in
13 the comment box located in the back of the room and
14 you may submit comments to our office through
15 February 18, 2002.
       I'd like to thank everyone for
17 attending this hearing this evening and I'd also
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18 like to thank all of the people that offered their 19 comments.
20 Let the record show that the hearing 21 adjourned at 8:35, 29th of January 2002. Thank you

440622/020135

24

22 very much for attending.

(Hearing adjourned.)

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1 STATE OF TEXAS
3 COUNTY OF HARRIS
4 I, R. PATRICK TATE, Certified Shorthand Rep
5 duly qualified in and for the State of Texas
6 hereby certify there came before me the
7 above--described hearing on the Shoal Point
8 Container Terminal;
      I further certify that the foregoing
10 transcript is a true and correct transcript
11 original stenographic notes.
       I further certify that I am neither at
13 or counsel for, nor related to or employed
14 of the parties to the action in which this
15 deposition is taken; and furthermore, that
16 a relative or employee of any attorney or c
17 employed by the parties hereto or financial
18 interested in the action.
       IN WITNESS WHEREOF, I have hereunto set my
20 hand and affixed my hand this 6th day of February
21 2002.
22
23
24
       R.PATRICK TATE
       CSR NO. 1730
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